New Ore Pier Unloads Ton A Second

November 25, 1957

RAILWAY AGE *weekly*

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Detection Devices Coming into Own

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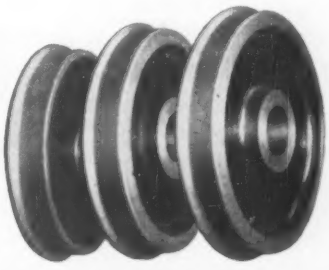

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RAILWAY AGE *weekly* November 25, 1957 • Vol. 143, No. 22

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Loomis 'plugs' diversification ..... p. 9

Restrictions on railroad use of other transportation media "cause an unwarranted increase in the total cost of moving the nation's traffic," AAR President Loomis told the convention of the National Industrial Traffic League. The league voted "no participation" in selective rate increase action and also deferred action on the "Symes Plan" for federal financing of railroad equipment purchases.

New C&O ore pier unloads a ton a second p.18

The $8.2-million facility being completed by the railroad at Newport News, Va., has three 18-ton ore-unloading cranes on a finger-type pier with two 48-in. belt conveyors running inshore to a semi-automatic carloading house. Here's how and why the pier will speed delivery of ore to its final destination, reduce ship turnaround time, and afford substantial savings to ship owners.

Detection devices are coming into their own p.20

Ten forms of apparatus, installed at many places on the road and in yards, can automatically detect hazardous conditions on tracks and bridges as well as defects on passing cars and locomotives, and can control signals to stop trains. Use of such devices is becoming increasingly necessary because, for one thing, there are now fewer men working on the wayside to spot the defects visually.

Public relations pay off for the D&H p.29

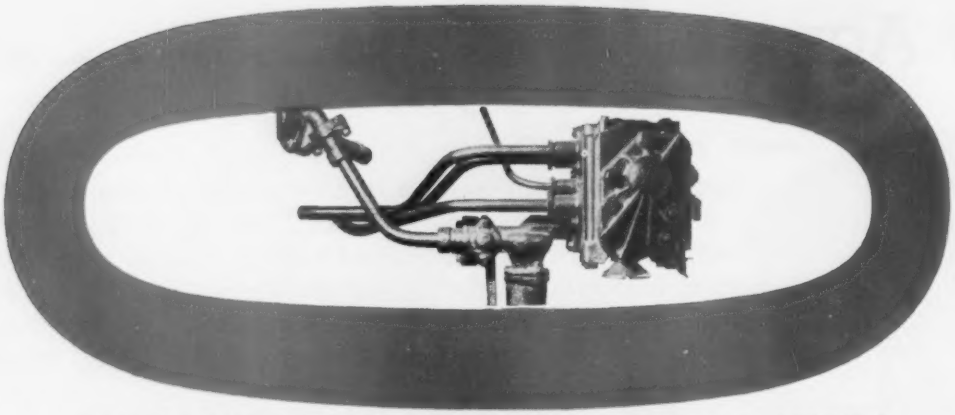
The effectiveness of the road's new and complete PR program, which is now a year and a half old, makes D&H men wonder how they ever got along without it. Main goal of the program is to help D&H employees, customers, shareholders, municipal and state legislatures and the general public understand why the road does what it does.

Santa Fe 'non-op' strike is averted p.40

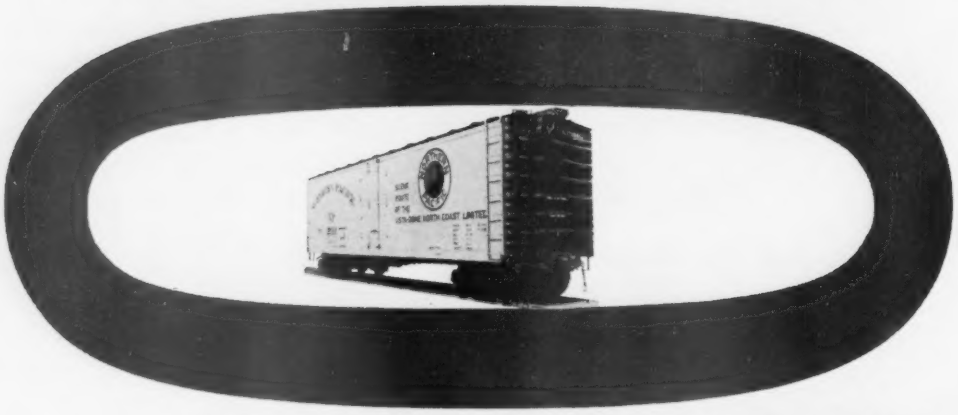
Agreement in union-shop dispute, reached last week, came 77 hours before deadline set for a walkout by 15 non-operating unions. The issue of union use of members' dues for political purposes did not enter directly into the agreement, a labor spokesman says. The railroad indicates any dispute over the issue will be open for judgment by the courts.

Public relations are key to RR future p.41

So said Owen Clarke, chairman of the ICC, at the Railroad Industry Forum during last week's annual convention of the National Defense Transportation Association. Solution of the car-supply problem, he also said, should come from within the industry rather than through government assistance.



WROUGHT IRON AIR BRAKE PIPING STOPS



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List all the improved design features incorporated into Northern Pacific's fleet of 500 refrigeration cars and you would end up with several pages.

They range all the way from an increased truck capacity of 24% to greater door width which speeds up lift truck loading and unloading operations. A memo from the Line's Mechanical Engineer summed it up this way: "These cars are designed to better meet present day operating conditions, reduce maintenance, and provide more years of better car service."

Specific evidence of these lower maintenance and longer service life objectives is the use of wrought iron for the air brake systems on all cars. More than 22,000 feet of this time-tested material was used to safeguard the all-important braking system against premature failure caused by corrosion and fatigue.

The cars, representing an investment of approximately five million dollars, were built at Northern Pacific's Brainerd, Minnesota, Car Shops.

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Week at a Glance CONT.

Current Statistics

Operating revenues, nine months	
1957	$7,909,421,720
1956	7,824,822,128
Operating expenses, nine months	
1957	$6,180,350,497
1956	6,027,733,256
Taxes, nine months	
1957	$827,403,872
1956	831,431,170
Net railway operating income nine months	
1957	$699,477,372
1956	744,662,636
Net income estimated, nine months	
1957	$538,000,000
1956	612,000,000
Average price 20 railroad stocks	
November 19, 1957	64.29
November 20, 1956	94.88
Carloadings revenue freight	
Forty-five weeks, 1957	31,445,145
Forty-five weeks, 1956	33,037,291
Average daily freight car surplus	
Wk. ended Nov. 16, 1957	19,032
Wk. ended Nov. 17, 1956	4,452
Average daily freight car shortage	
Wk. ended Nov. 16, 1957	218
Wk. ended Nov. 17, 1956	7,069
Freight cars on order	
November 1, 1957	65,718
November 1, 1956	122,250
Freight cars delivered	
Ten months, 1957	84,639
Ten months, 1956	53,007

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The Action Page—Unions could turn the tide p.46

No one thing, not even easing of regulatory restraints, would so strengthen the railroads in competition with rival methods of transportation as would a modernization of presently restrictive union rules. Furthermore, railway unions certainly cannot thrive if the railroad industry does not.

Short and Significant

Truck defects or driver deficiencies . . .

were found on 87.3% of the 10,685 vehicles which received a thorough inspection during the fourth 1957 nationwide road check by the ICC's Bureau of Motor Carriers in cooperation with state enforcement agencies. More than 2,200 of the vehicles checked were given "out-of-service" markers because they were "so immediately hazardous to operate as to be likely to cause an accident or breakdown."

Fines totaling $15,400 . . .

plus costs were paid in October by 23 railroads on 170 counts involving violations of Safety Appliance, Hours of Service, Signal Inspection, Accident Reports and Locomotive Inspection Acts. The fine total was more than three times that of the previous month, when 12 roads paid $4,500, plus costs.

The per diem ruling . . .

which gives short-line railroads a more important role has been affirmed by the ICC. The ruling, made originally last March by the commission's Division 2, requires that the Section 5a agreement which covers per diem be modified to provide that a representative of the American Short Line Railroad Association be made a voting member of the General Committee of the AAR's Operating-Transportation Division when the committee considers per diem matters. Like the division, the commission rejected short-line requests for other modifications of the agreement.

Subsidies don't scare Alpert . . .

if they cut commuter train deficits. The New Haven's head regards commutation service as a community service, and he believes the community should help to pay for it. As a means to bring this about he is having bills readied for the next sessions of the New York and Massachusetts legislatures.

RPI calls for 'united front' . . .

The Railway Progress Institute, declaring that the earning capacity of the railroads has been hampered by existing law and the administration of the law, has issued a call to organizations representing shippers, railway labor and investors to make common cause with the railroads and the RPI to effect legislative and regulatory relief which will give the rails earning capacity adequate to continue improving and expanding their services.

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RAILWAY AGE
The Industry's Newsweekly

Loomis 'Plugs' Diversification

Tells National Industrial Traffic League that restrictions on railroad use of other forms of transport cause "unwarranted increase" in cost of moving nation's traffic; league defers action on Symes plan and votes "no participation" in selective rate increase proposal.

"Limitations upon the opportunity of railroads to employ other transportation media cause an unwarranted increase in the total cost of moving the nation's traffic."

That's what AAR President Daniel P. Loomis told the National Industrial Traffic League at a special forum meeting which opened the league's 50th anniversary convention in Chicago. If relief is granted from outmoded restrictions, he explained, the nation's railroads could offer the public complete functionalized service by using the particular transportation tool best suited for performance of each part of the total transportation job.

During the convention's regular business sessions, the league voted to defer final action on the Symes plan for government financing of railroad equipment, but agreed to appoint a special committee to study the plan and recommend action by the league. A league spokesman indicated that this committee's report might lead to a special meeting and/or a mail ballot of its full membership, probably early in 1958.

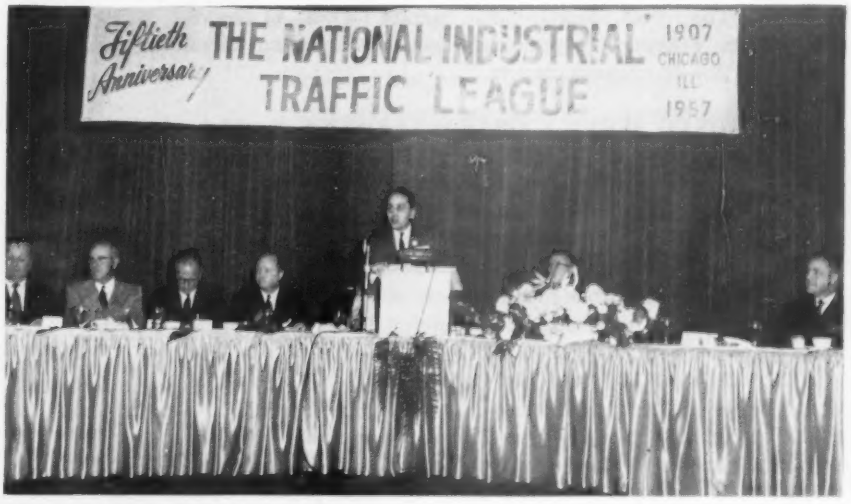
The league also voted not to participate in "selective" rate increases, including those currently being proposed by the railroads. Some members also expressed the feeling that, although it has been the league's policy to stay out of labor problems, certain legislation that may come up in the next Congress could greatly increase railroad operating expenses. The league was advised to watch for this type of "ill-advised" legislation, and to work toward its defeat.

The league also approved the idea of some limitation on the so-called agricultural exemptions in Part II of the Interstate Commerce Act. A special committee will be appointed to "confer with other organizations, including agricultural groups, in an effort to modify the language of Section 203(b)6 and reasonably curtail the list of exempted commodities and to consider any other change in the list of exempted commodities which may be brought forward by other organizations."

In other actions, the league:

- Approved dissolution of the Railroads' Tariff Research Group and creation in lieu thereof of a committee to be known as the Railroads' Freight Tariff Committee, composed of tariff publishing officers of existing agency bureaus. This committee would be responsible for maintaining the Tariff Maker's Manual and for policing tariffs to insure their issuance in accordance with provisions of the manual.
- Adhered to its previous opposition to penalty per diem, but conceded that "the subject of penalty per diem charges as a plan for possible alleviation of car shortages shall be submitted for study and appropriate report to the same special committee appointed for the purpose of studying the plan to create a Federal Railroad Equipment Administration (Symes plan)."
- Recommended that its proposed rule of rate-making should be clarified and amended to read as follows: "In determining a minimum rate the [Interstate Commerce] commission shall not consider the effect of such rate on the traffic of any other *carrier or* mode of transportation, the relation of such rate to the rate of any other *carrier or* mode of transportation, or whether such rate is lower than necessary to meet the competition of any other *carrier or* mode of transportation." The word "carrier" was added to the proposed rule in the belief that rates charged by an "efficiently operating" carrier should not arbitrarily be held to a higher level than necessary merely because some competing carrier cannot make the same profit from operation at such rates. Purpose of the modified rule would be to stimulate competition between carriers of the same, as well as of different, types.
- Voted to oppose legislation pending in Congress, as well as any new legislation, to modify or change the present definition of a private carrier.

"Each form of transportation is, in reality, a different tool or set of tools that may be used in performing transportation service to the public," Mr. Loomis said in his forum talk. Each has special advantages in particular circumstances and in combination with others. "But, under pre-



NIT LEAGUE PRESIDENT, Grant Arnold, is shown presiding at the group's annual luncheon. Mr. Arnold, who is general traffic manager of the E. J. Lavino Company, was reelected as the league's president.

vailing policies, severe restrictions are imposed upon the railroads in utilizing other tools of transportation so they can provide economically integrated transportation services. Is there any reason today why opportunities to shift with modern inventions should be denied simply because a company is in the railroad business?"

Progressive improvements and economies in railroad transportation will not come automatically, Mr. Loomis explained. If potentials and objectives are to be translated into accomplishments there must be a favorable environment.

Flexible pricing is indispensable in selling railroad service, Mr. Loomis added. "Railroad rate theories and structures designed for conditions existing long years ago may in many respects be ill-suited to present circumstances and competitive transportation."

The league's 50th anniversary luncheon was addressed by Commissioner Howard Freas of the ICC; Thomas E. Stakem, member, Federal Maritime Board, and James R. Durfee, chairman, Civil Aeronautics Board.

"Monopoly in transportation . . . does not exist today," Commissioner Freas told the luncheon audience. "It is difficult to think of a wide place in the road that is not served, if occasion requires, by at least one for-hire motor carrier. If there is traffic to justify there is probably rail, water, express, freight forwarder, pipeline and/or air line service."

No one knows the total capacity of the various carriers' facilities, he explained. "We do know, however, that except in times of real emergency it exceeds by substantial amounts the use made of it. Since idle or uneconomically used equipment earns no profit, it is natural that there should be intense rivalry for the business available."

Competition in transportation, unless subjected to some restraints, tends to become ruinous and destructive, the commissioner pointed out. "The role of the commission in the future, as in the past, will be to protect the public interest. As I see it, it is going to be more and more judicial in character, passing on complaints caused by severe competitive pressures."

Watching Washington *with Walter Taft*

• **ICC CHAIRMAN CLARKE OPPOSES** the Symes plan for creation of a federal government agency to purchase equipment for lease to railroads. The objectives, he thinks, could be achieved in a better way—through a private corporation offering arrangements for "lending the credit of railroads doing well to those not doing so well."

• **ESCAPING PROPERTY TAXES** on the rolling stock and obtaining lower interest rates, in Mr. Clarke's opinion, would be but slight advantages —more than offset by the disadvantages of government intervention. He disputes contentions that there is no market for equipment trust certificates. He concedes that interest rates are relatively high, but insists that is a general money-market factor which hits railroads no harder than other industries.

• **INADEQUATE TRUCK MAINTENANCE** "at its worst" was pointed up by the July 12 accident at Dunsmuir, Cal., where a tractor-semitrailer-trailer combination "ran wild down a long grade into the town," colliding with 12 other vehicles, killing two persons, injuring eight, and causing $42,200 of property damage. That's what the ICC said in finding that the accident was caused by "complete failure of a seriously defective brake system." It also found that the driver involved did not meet "minimum physical and experience requirements" which it prescribes for interstate operators.

• **ALLEGEDLY PRIVATE CARRIAGE** was the way the commission described the transportation being performed by the vehicle combination, owned and operated by an Arizona company which "performs transportation regularly" between points in that state and Washington, Oregon and California. The report suggested that "unsafe factors" in the case had emphasized the "extreme importance of effective enforcement of safety regulations as to non-certificated carriers."

• **IMPROVED SERVICE CHARACTERISTICS** should be built into freight cars in the opinion of ICC's Tuggle, who is the commissioner in charge of car-service work. He has believed for some time, he said recently, that there are situations where the railroads should give consideration to the feasibility of further development of special-purpose cars—"carefully adapted to a particular traffic job, yet suited for the movement of general traffic." Such cars "are needed not only to meet customer wants but to enable railroads to meet today's competition," the commissioner added.

• **$230.2 MILLION and $80½ MILLION** are what railroads claim would be the initial capital outlay and subsequent annual expense, respectively, of compliance with proposed new locomotive inspection rules. The rules are now being considered by the ICC, an examiner having recommended their adoption on pretty much the basis proposed by the Section of Locomotive Inspection. The railroad cost estimates were pointed up at the recent oral argument of the case before the commission.

Retirement System Source Of 'Grave Concern'—Healy

Last year, for the first time in its history, the railroad retirement system's benefit payments exceeded tax contributions.

Although the system "is not in any immediate peril. . . there is grave concern over the long range view," U. S. Railroad Retirement Board Member Thomas M. Healy declared recently.

The system, he told the Railway Club of Greenville, Pa., "is now operating on an actuarial deficiency of around $170 million per year." During the fiscal year ended June 30, he said, the system paid out $678 million in benefits, while collecting only $618 million, "and the spread between the two will be greater this year because, despite warnings of an existing deficiency, legislation adopted during the closing days of the second session of the 84th Congress increased benefits, generally, about 10%."

Similarly, Mr. Healy pointed out, the railroad unemployment insurance system also posted a deficit, with benefit payments and administrative costs exceeding $140 million and management contributions plus interest on investments totaling only $89 million.

Mr. Healy, management member of the board, rapped "the continuing donations

(Continued on page 40)

Where railroad progress is cast in steel....

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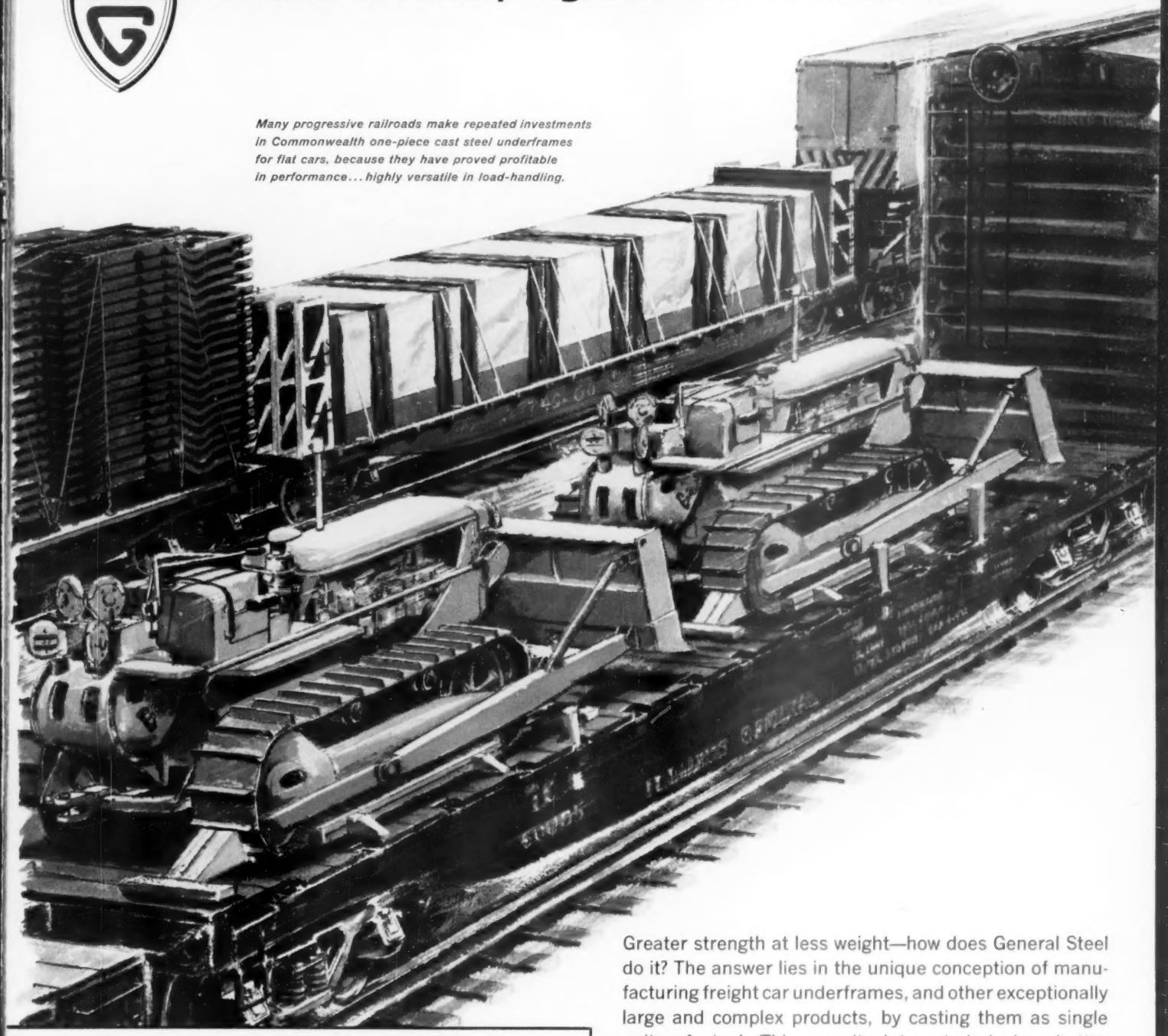
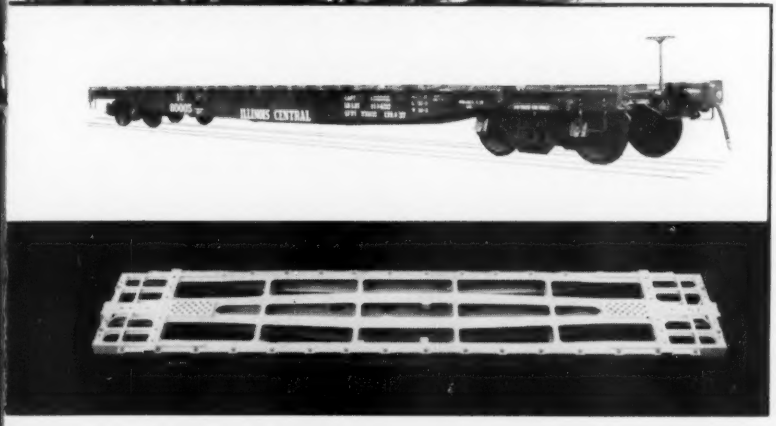




Greater strength at less weight—how does General Steel do it? The answer lies in the unique conception of manufacturing freight car underframes, and other exceptionally large and complex products, by casting them as single units of steel. This permits integrated design, better distribution of metal within the design, to meet the stresses, carry the loads.

For the railroads of the world, and many other industries, this engineering in cast steel provides higher availability of product, lower maintenance costs. Specify Commonwealth products... by far your best investment, especially over the long haul.

Safer shipping for heavier loads is provided by the unusual load-carrying capacity of Commonwealth one-piece corrosion-resistant cast steel flat car underframes. Integrated design of frame provides exceptional strength at minimum weight, increased availability and lowest maintenance.

GENERAL STEEL CASTINGS

GRANITE CITY, ILL. · EDDYSTONE, PA. · AVONMORE, PA.

RESEARCH THAT WON A MEDAL

This year, for the first time, The Franklin Institute's coveted George R. Henderson Medal—awarded for achievements in research in railroad technology — was *not* given to an individual inventor or engineer. It was awarded to an association—the Association of American Railroads.

This award honors the contributions made by the Association's Mechanical and Engineering Divisions to the advancement of railroad safety, progress and efficiency.

These contributions are reflected in 92 patents which have resulted from the Association's research. Currently, the Association has some 96 projects under way at its research center on the campus of the Illinois Institute of Technology in Chicago. And it is planning additional facilities to expand this research.

The railroad industry will continue its scientific research to provide transportation service that is constantly increasing in efficiency and economy.

ASSOCIATION OF AMERICAN RAILROADS
Washington, D. C.

Operation "Roll-in" *gives commuters a break!*

1

2

Shore Road Bridge
(near Manhasset, L.I., N.Y.)
Long Island Rail Road Company

General Contractor
Horn Construction Company, Inc.
Merrick, Long Island

Designed by:
Long Island Rail Road Company

Steelwork Fabricated and Erected by
American Bridge Division
United States Steel

3

Train service interrupted only 19 hours as busy LIRR commuter line switches from long fill to 3-span bridge!

To make room for a new 4-lane highway which will underpass its North Shore line near Manhasset, the Long Island Rail Road had to replace 200 ft. of high fill with a bridge. And, to complicate matters, it was impractical to build a temporary track around the construction.

The way the Long Island Rail Road engineers solved the problem . . . with little or no inconvenience to its commuting customers . . . is spectacularly unique:

Operation "Roll-in" was preceded by about 11 months of preparation—the abutments for the new bridge were installed under the track and the three plate girders (one 89′ 4″ long and two 68′ 1″ long) were temporarily mounted on rollers adjacent to the tracks. With everything in readiness, train service was discontinued at 11 P.M., Saturday the 17th, November 1956. The rails were quickly removed; the soil underneath was dug out to expose the supporting piers; one by one the plate girder spans were rolled into position (each span had been fully erected with ballast, ties, rails and third rail all in place before the move). By 6 o'clock Sunday afternoon, November 18th, the bridge was in place, the rails connected and the line again ready for the resumption of passenger service *after an interruption of only 19 hours!*

All structural steelwork for this new bridge was fabricated and erected by American Bridge.

1. The east and center spans have been moved into line. The site is cleared and the west span, on the right, is about to be rolled into position. The girders are 7′ high.

2. The three sections have been brought into line. The most distant span is resting on its bearings, but the other two spans are still on the roller conveyors, about 15″ above their ultimate level. The new highway will be dug beneath the center span.

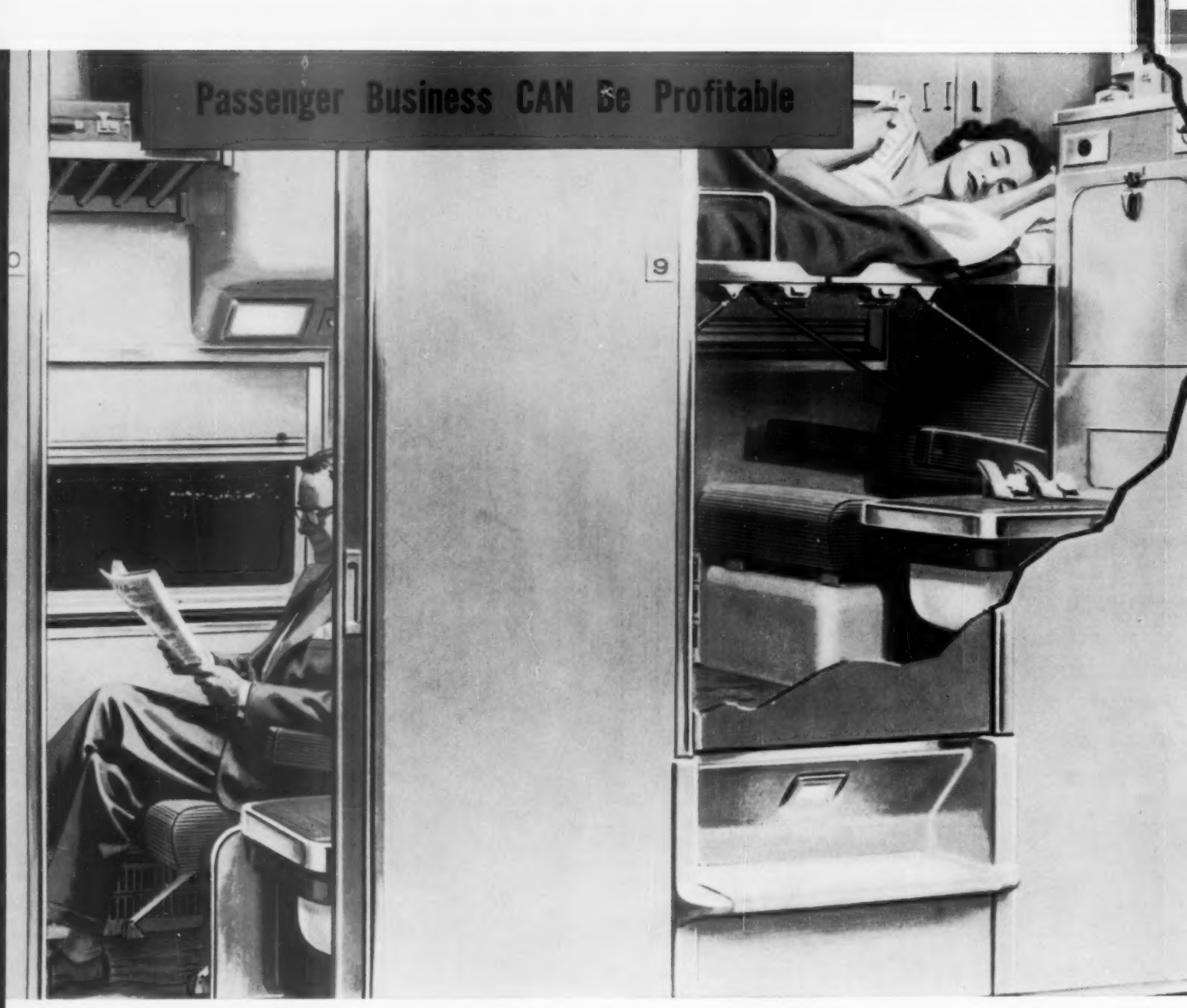
3. The three-section bridge in final position. Note the old East Shore Road passing under the railroad in the narrow tunnel at far left.

American Bridge Division, United States Steel Corporation
General Offices: 525 William Penn Place, Pittsburgh, Pa.

Contracting Offices in: Ambridge · Atlanta · Baltimore
Birmingham · Boston · Chicago · Cincinnati · Cleveland
Dallas · Denver · Detroit · Elmira · Gary · Houston
Los Angeles · Memphis · Minneapolis · New York
Orange, Texas · Philadelphia · Pittsburgh · Portland, Ore.
Roanoke · St. Louis · San Francisco · Trenton
United States Steel Export Company, New York

AMERICAN BRIDGE

UNITED STATES STEEL



this new car will pay for itself in two years.

The Burlington Railroad, time and again, has demonstrated that passenger business can be profitable, and here is a recent example of how they do it.

They bought the first four stainless steel Budd Siesta Coaches, a revolutionary 40-passenger car that provides travelers with private room accommodations at coach fares plus a modest occupancy charge.

Calling them "Slumbercoaches", the Burlington placed them in service on their new Vista-Dome Denver Zephyr, running a daily schedule between Chicago-Denver-Colorado Springs.

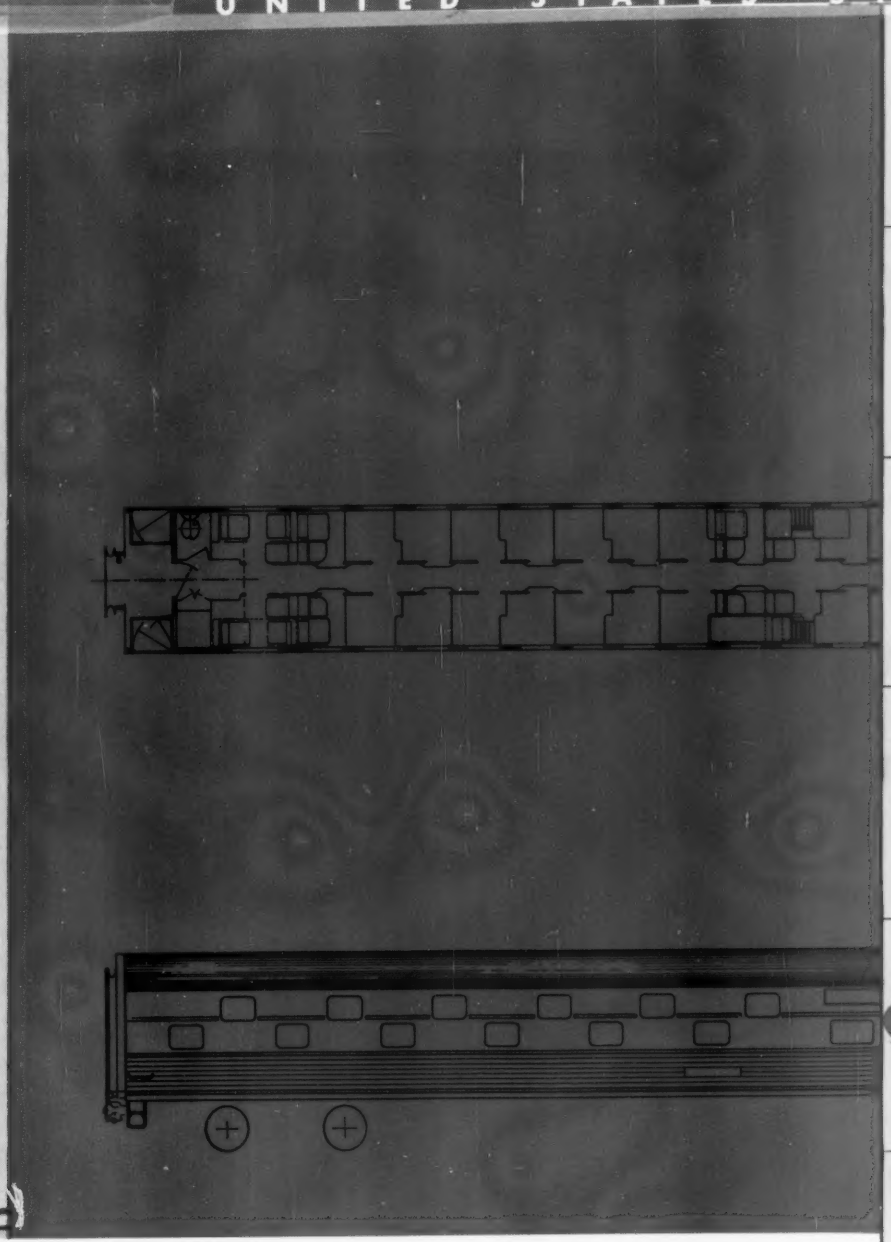
With an average occupancy of *more than 75%* per car trip for the first 8 months of 1957, the net income over out-of-pocket operating costs *should equal the purchase price of the cars in about two years.*

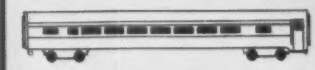
Again the Burlington has applied a basic formula for making passenger business pay. Here it is:

1. Sound equipment with strong passenger appeal
2. Convenient, frequent schedules
3. Economical fares
4. Vigorous promotion
5. Courteous service

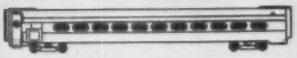
It is time to reject the erroneous belief that carrying passengers *has* to be a losing business and that the only remedy for losses is abandonments. There are too many examples proving that this is simply not true. Where losses exist, remedies can be applied. We are prepared to help to supply them.

UNITED STATES STEEL

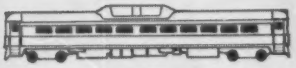




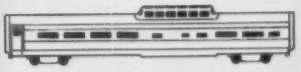
MODERN COACHES,
DINERS, SLEEPERS



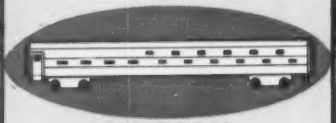
PIONEER III
ADVANCED DESIGN



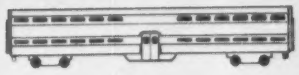
ALL-PURPOSE
RAIL DIESEL CAR



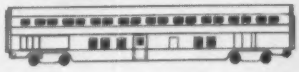
DOME COACH



ALL-ROOM
SIESTA COACH



DOUBLE-DECK
COMMUTER CAR



HI-LEVEL CAR

RAPID TRANSIT CAR

Facts about the Siesta Coach

The Siesta Coach has 24 single rooms and eight double rooms each with the following features:

Window seats for daytime travel.
Full length beds.
Toilets, washstands, full length mirrors.
Air Conditioning and heat, individually controlled.
Easy-to-clean rubber tile floors.
Special cribs for babies.

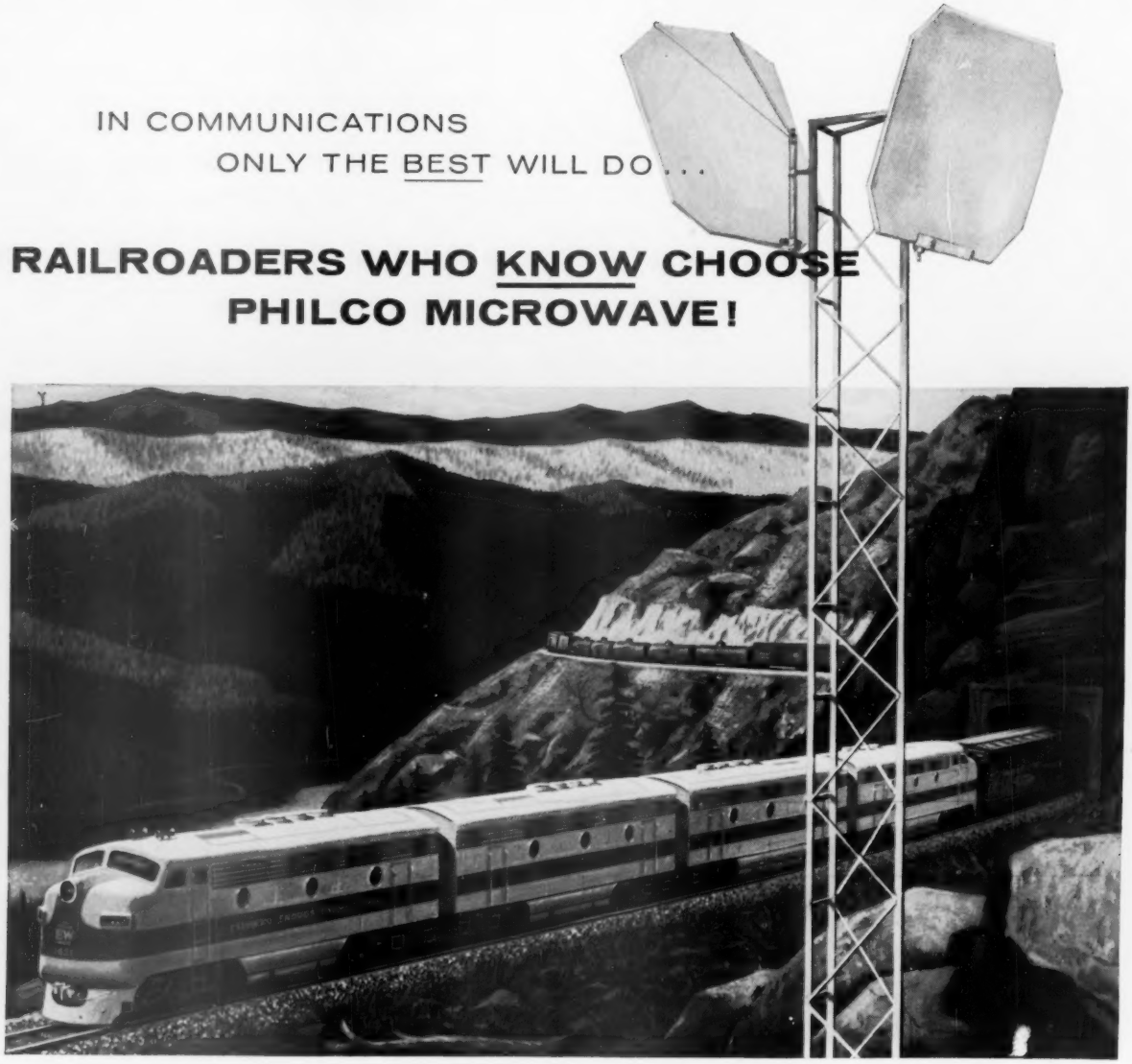
We are currently building Siesta Coaches for delivery in 1958.

THE BUDD COMPANY, Philadelphia 15, Pa.

Budd

IN COMMUNICATIONS
ONLY THE BEST WILL DO . . .

RAILROADERS WHO KNOW CHOOSE PHILCO MICROWAVE!



Philco Microwave Delivers Economical, Efficient, Reliable Communications!

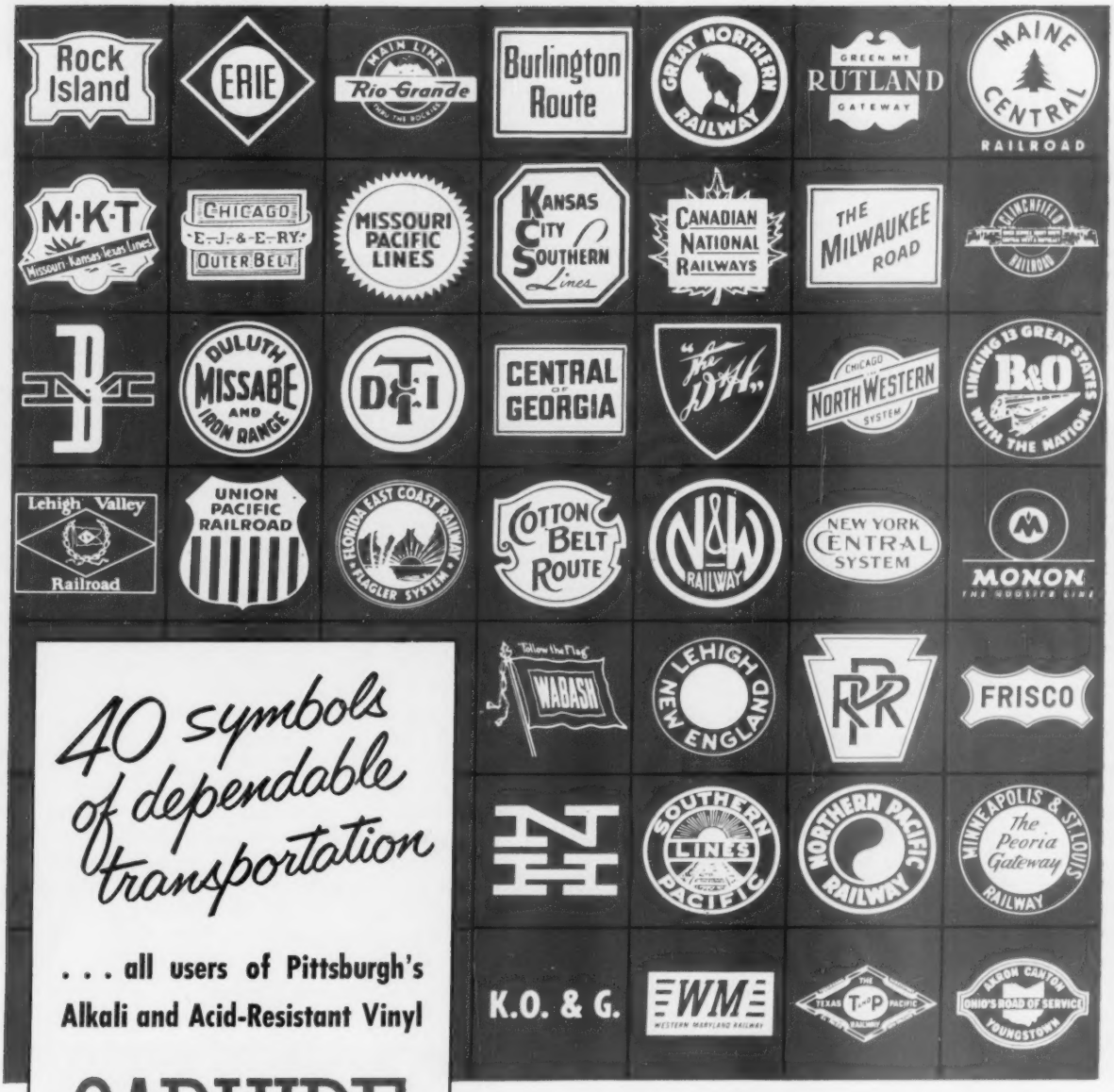
Philco microwave is proving itself in many railroad jobs, providing dependable circuits for trunk telephones; trunk printers; data processing equipment; automatic car accounting systems; car registry service; car movement information; train dispatching; remote control of VHF radio to maintain contact with trains; centralized traffic control; party line conversation between way stations and operating terminals.

And Philco microwave is *reliable*, with tubeless power supplies that assure minimum maintenance and significant reductions in operating cost. Philco microwave operation is virtually unaffected by severe weather, free from the physical limitations of wire and pole systems, unhampered by the problems of difficult terrain and over-water transmission.

Philco engineers will be happy to help with your special microwave requirements. Please contact us for further information. Look ahead . . . and you'll choose PHILCO.

PHILCO®

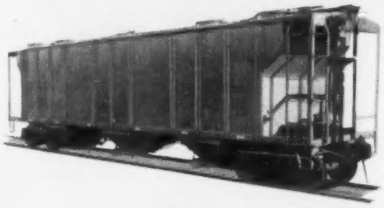
Government & Industrial Division
Philadelphia 44, Pennsylvania
In Canada: Philco Corporation of Canada Limited, Don Mills, Ontario



40 symbols of dependable transportation

. . . all users of Pittsburgh's Alkali and Acid-Resistant Vinyl

CARHIDE



Most of America's leading railroads use Pittsburgh's Alkali- and Acid-Resistant Vinyl CARHIDE on covered hopper cars. By practical everyday experience, they have learned that this tough, durable finish is not affected by soda ash, alkalis, sulphur, phosphates and most other corrosive ladings. They also know it gives armor-like protection against mechanical damage and temperature and weather extremes.

- **AAR Vinyl CARHIDE** is quickly and easily applied. It dries so rapidly, one-day finishing schedules can be maintained. It also cuts repainting costs. Many cars used as long as six years have required no refinishing.
- **For additional information** about this long-lasting finish which has given satisfactory service to so many railroads, get in touch with Pittsburgh Plate Glass Company, Industrial Finishes Division, 1 Gateway Center, Pittsburgh, Pa.

PITTSBURGH® PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

C&O's New Ore Pier Unloads

The volume of ores of various kinds imported through the port of Newport News, Va., has steadily increased. Because its ore-handling operation at that point was being worked nearly at full capacity while further increases in ore imports were indicated, the Chesapeake & Ohio decided in 1954 to enlarge its facilities. As a result, the road is just completing a new $8.2-million ore pier for the rapid handling of chrome, manganese, iron and bauxite ores, as well as other bulk materials, from ships to cars.

The new facility, designated pier No. 9, was designed by C&O engineers only after they had visited the principal ports in America and Europe to study ore-handling equipment first hand. Pier No. 9 has three 18-ton ore-unloading cranes on a finger-type pier with two 48-in. belt conveyors running inshore to a semi-automatic car-loading house. It is capable of unloading ores and other bulk material at the rate of a ton a second.

Two ore carriers containing different ores can be unloaded simultaneously or one ship can be unloaded quickly by the three unloading cranes. Pier No. 9 is capable of unloading the largest ore carriers now afloat, as the depth of water on one side is 40 ft and on the other 35 ft. Once moored to the pier, the carriers do not have to be moved until their loads have been completely discharged. The three ore-unloading cranes do the moving. While the carriers are being unloaded they can take water aboard and arrangements are being made for them to take on fuel.

The new finger-type pier is of cellular sheet-pile construction with the cells filled with sand and gravel. The deck will be concrete paved and one track extends out on the pier for its full length. The pier is about 82 ft wide and 712 ft long, but a system of dolphins for mooring ships extends its length to a total of 1,191 ft.

Use German-Built Unloaders

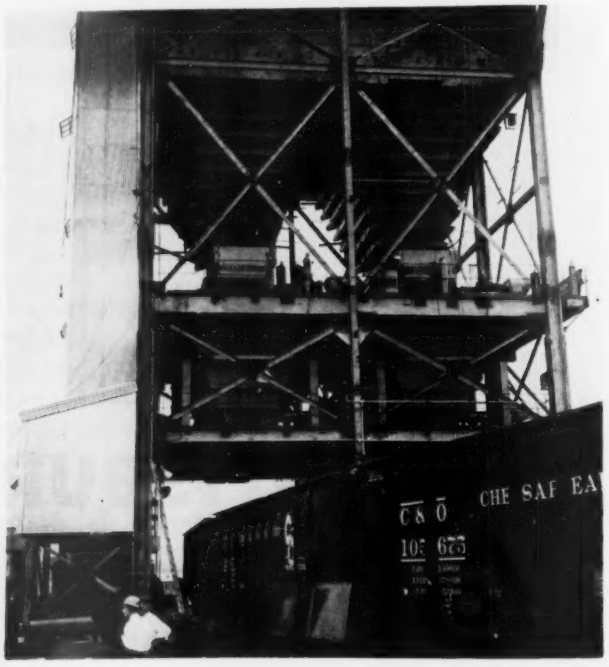
The three ore-unloading cranes, each having a capacity of 1,440 tons per hour, are of particular interest. They were manufactured in Duisburg, Germany, by Demag, A. G., and are reported to have a high operating efficiency, due principally to their slewing-jib design. The ore bucket is suspended from the end of a short boom carried on the slewing portion of the trolley. The slewing portion is suspended in a ball race and can rotate in either direction. The radius from the center of the bucket to the center of rotation is 18 ft. The maximum bucket reach outboard from the pier is 81 ft.

The advantage of this arrangement is that ore can be taken from almost any part of a ship's hold without moving the crane. Trenching back and forth is eliminated and the ore is kept to a plane surface. This permits the bucket to pick up a full load nearly every time, thus expediting the unloading of the vessels. The slewing design also cuts off 36 ft of trolley travel for each bucket load, thereby speeding delivery of the ore to the crane hopper.

The ore buckets, also designed and manufactured by Demag, were selected for their quick-change and clean-up features. Totaling nine in number, these buckets range in capacity from 80 to 245 cu ft. The larger buckets are used for the initial unloading through large hatches, the smaller ones for cleaning holds and reaching around shafts, and the intermediate buckets for in-between use, and for handling extremely heavy ores. One end of these buckets can be placed against a propeller shaft and the other side will scrape the ore up between the ribs. Special connections make it possible to change from one size bucket to another in less than 10 min.

The buckets have wide spans, ranging up to 32 ft when fully opened, and have low centers of gravity. They are considerably lighter than conventional digging buckets of similar capacity and depend on mechanical design, rather than weight, for biting into the ore. The shovels move horizontally, which reduces the wear and tear on the floor of the ship's holds. With the Demag trimming buckets it is possible to

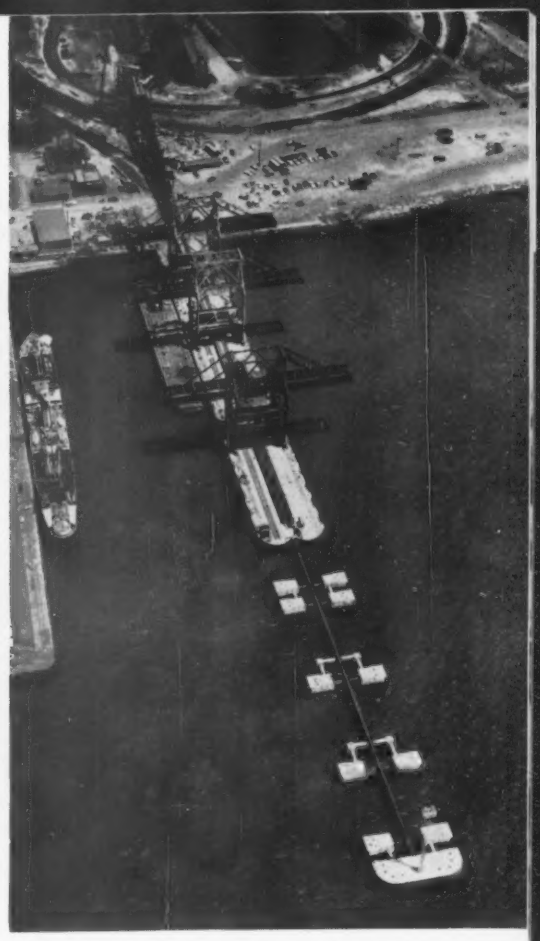
ORE, after being unloaded from the carrier, is deposited by a special slewing-jib trolley into a 150-ton receiving hopper on the unloader. From there it may be placed on either of the two 48-in. conveyor belts which carry it to storage bins.



STORAGE BINS and weighing hoppers, one for each belt, discharge predetermined amounts of ore into cars spotted below them on two tracks. Weighing is done electronically and recordings are printed automatically.

a Ton a Second

- Will unload largest ore carrier afloat
- Once moored to pier, ships do not have to move
- Unloads two ships simultaneously
- Shortens turn-around time of ships
- Handles two kinds of ore simultaneously
- Has quick-changing buckets
- Empties holds without use of auxiliary equipment
- Slewing-jib design trolley speeds unloading
- Ore weighed automatically as it is loaded in cars



PIER 9 at Newport News with three towers can unload two ore carriers simultaneously, or work together on one ship. Dolphins (foreground) provide mooring facilities for two more waiting vessels.

completely clean up a ship without the use of auxiliary equipment.

Another feature contributing to the high efficiency of these buckets is the planetary winch which powers the holding and closing lines. The winch permits the bucket to be opened or closed while hoisting or lowering at full speed.

The slewing-jib trolley is designed so the operator always has the bucket in view. While seated, he has a single control lever in each hand. He controls all bucket motions with the lever in his right hand and the trolley travel and rotation with the one in his left.

How Conveyor Belts Work

After being picked up by the buckets, the ore is carried toward the pier by the trolley and deposited into a 150-ton receiving hopper on the unloader. From here the ore may be put on either of the 48-in. conveyor belts.

Apron feeders with adjustable speeds discharge the ore from the 150-ton hoppers of the unloaders onto accelerating conveyor belts which, in turn, discharge the ore onto the main 48-in. belts. Accelerating the ore to the speed of the main belt before discharging lessens the wear and scuffing of the main belts. The latter run at a speed of 600 fpm and each has a capacity of about 3,600 tons per hour when handling ore weighing 150 lb per cu ft. The belts are designed to handle ore weighing 225 lb per cu ft. They are 1,085 ft and 1,080 ft long, respectively, and each is operated independently.

The main pier conveyor belts carry the ore to a carloading headhouse containing two 780-ton receiving hoppers, one for each belt, and they can discharge into either of these hoppers. Thus two grades of ores may be handled simultaneously. Two railroad tracks pass under the carloading house, permitting the loading of two cars simultaneously.

Under each of these receiving hoppers are two 72-in. wide manganese-steel apron feeders which discharge the ore into two separate 45-ton weigh hoppers. The operator sets a dial to deposit a predetermined amount of ore in each weigh hopper and the mechanical feeders work until the desired amount of ore is in each, then automatically stop. The weigh hoppers dump the ore into cars spotted below them and then are reweighed so that any ore sticking to the sides will not be included as part of the load. The weighing is done electronically and recordings are printed automatically. Cars loaded at the carloading house do not have to be reweighed.

The weigh hoppers are arranged so ore may be dropped into a railroad car from both hoppers with a single spotting of the car. The hoppers may be dumped jointly or separately. The tracks are arranged in a loop so cars may be spotted one after another beneath the weigh hoppers by three 42-in. gage, 55-ton diesel-electric side-arm pushers, then taken away. The carloading facility will load 72 fifty-ton cars per hour.

Since Newport News has been in the path of several hurricanes in the past, the railroad has taken certain precautions to safeguard its new facility. The cellular construction of the pier, in addition to the steel piles driven under the running rails of the unloading cranes, gives the pier great stability. At the shore end of the pier, six hurricane tie-downs have been provided so that, when a hurricane warning is issued, the unloading towers can be moved shoreward and firmly secured. In addition, each tower is equipped with an anemometer. When this instrument registers winds greater than 38 mph, it causes clamps to automatically lock the crane to the rails.

Limit switches also have been provided at each end of each unloader for preventing the tower from colliding with the others or running off the rails.

The unloading towers are reported to be the only ones on the Atlantic coast equipped with elevators to carry the operators to their stations. The carloading house also is equipped with an elevator. Both the operator's cabs in the unloaders and the operator's room in the carloading house are air conditioned.

In addition to speeding the delivery of ore to its final destination, the railroad states that the new pier will also reduce turn-around time of ships calling at Newport News and afford substantial savings to ship owners.

The C&O has also provided a modern car-washing plant in conjunction with the new ore pier. To avoid contamination of the ore, all cars are washed clean prior to being loaded.

In the operation of this facility, a 42-in. gage, 55-ton diesel-electric side-arm pusher pushes cars to be washed around a circular track and into a rotary car dumper. As the car is rotated toward the dumped position, debris is washed out by two manually operated high pressure hoses. Debris from the cars drops into a pit which is periodically cleaned out by a truck crane with a clamshell bucket. The capacity of the car-cleaning plant is about 25 cars an hour.

ONE TYPE of dragging equipment detector, shown left, consists of cast iron brackets: other type, shown center, has sheet metal panels on a horizontal shaft between two track ties. Device to detect falling rocks, right, is made of wire fencing.

Wayside Detectors Enhance Safety

Ten forms of automatic apparatus, installed at many places on the road and in yards, can automatically detect hazardous conditions of tracks and bridges as well as defects on passing cars and locomotives, and can control signals to stop trains. From now on there will be an increasing need for these automatic safety detectors, not only because these devices are much more effective than previous practices of depending on train crews and men working along the right-of-way to see the defects, but also because fewer men are working on the wayside.

Railroads are having difficulty in finding enough competent telegraph operators willing to work at outlying points. Interlockings at crossings of railroads at outlying locations are being converted from manual to automatic control, or are being included in centralized traffic control projects. Automatic electric crossing gates are being installed at numerous crossings to replace watchmen and gatemen at manual gates. Many offices previously open 16 to 24 hours daily have been abandoned.

Furthermore, on many roads, new forms of power machines are being used to do practically all of the track maintenance work. Spot maintenance is done by small crews covering sections of 30 miles or more. On numerous roads, these long-range track crews use highway trucks rather than track motor cars.

This means that the number of operators, levermen and track men working on the wayside on most railroads has decreased decidedly in recent years, and will decrease further. As one consequence, there is a definite need for extensive applications of automatic devices that will detect hazardous conditions on tracks and bridges, as well as defects on trains.

Conventional automatic block signaling, in addition to indicating track occupancy, includes safety checks for (1) broken rail, (2) normal-closed position of all main track switches, and (3) cars occupying turnouts short of the clearance point. In addition, there are 10 more forms of automatic safety detectors which have definitely proved their worth in railroad service for periods ranging from one year to 25 years or more.

For Dragging Equipment

Brake beams or other loose equipment when hanging or dragging from cars or locomotives may cause derailments. About 22 years ago, devices were developed to detect such defects. One type consists of a long loop of brittle cast-iron, mounted on both sides of each rail, just below standard clearance for rolling stock. Hanging parts will break one of the detector loops which are so connected in a circuit that a relay is released.

Another type of dragging-equipment detector consists of sheet-metal panels bolted to a horizontal shaft mounted on bearings between two track ties, so that the top edge of the panels is about level with the top of the rails. When dragging equipment strikes one of the panels, the shaft is rotated a few degrees, operating a a circuit controller. Then spring pressure returns the panel to normal position.

Dragging equipment is most likely to cause derailments at switches where turnout rails may deflect the loose parts under the wheels. Therefore detectors are placed in approach to interlockings which include numerous switches and crossovers, as well as at important bridges and tunnels where a derailment might cause serious damage and perhaps block the line.

A total of more than 800 sets of these detectors have been installed on the lines of such railroads as the B&LE, B&M, DL&W, CGW, CMStP&P, GN, GM&O, NYC, MP, PRR, SP, SP&S, T&NO, UP

THIS DERAILMENT is typical of many that can be prevented economically by proven detectors which have been in service on various railroads for one to twenty years.

and Wabash. Some of these roads, and others, have installed these detectors as part of car inspection facilities on the track approaching the hump in gravity classification yards.

For Broken Wheels

Freight car wheels with sections of the flange broken out have caused serious derailments. Such defects are difficult to find, even when a car is standing in a yard. A device that automatically detects broken wheel flanges, as well as wheels that are loose on the axle, while cars are in motion, has gone through several years of development.

Each detector consists of a series of spring steel fingers, at right angles to the rail, with an insulated hardened steel pad near the end of each finger. The upturned end of each finger extends ¾ in. above the top of rail. The flange of a normal wheel encounters the insulated pads, thus depressing the upturned fingers away from the tread of the wheel. If a section of flange is broken out, the contacting finger tips touch the tread and cause a relay to operate.

This device will also detect a loose wheel if it fails to stay on the insulated pad. Each detector is 11 ft 6 in. long, i.e., more than the circumference of a 42-in. wheel. The detector functions at train speeds up to 20 mph. When a defective wheel is detected, an automatic pump sprays yellow paint on it, and an alarm is sounded.

These detectors have been installed on the D&RGW at Grand Junction, Colo.; RF&P at Potomac Yard, Va.; C&O at Covington, Ky.; NP at Pasco, Wash.; Southern at Birmingham, Ala.; and ACL at Florence, S. C. Detectors have been shipped for installation on the B&M at Mechanicville, N. Y., and B&O at Cumberland, Md.

Six months after the device was installed on the RF&P it detected a wheel with a 14-in. section of the flange missing; and the next day it detected a wheel with a 12-in. section gone. In about four years service on the D&RGW, the device detected ten wheels with broken flanges, one wheel loose on the axle, and one false flange. The NP installation placed in service September 5, already has detected one wheel with 8 in. of flange gone, a second with 10 in.; and a third with 3 in. gone and with a 36-in. crack in the flange.

These installations listed are at yards where speeds are slow. However, there is no reason why this detector cannot be installed on line of road at junctions, or other places where speed restrictions up to 20 mph are in effect. The detector can be damaged by equipment that is hanging or dragging from cars or locomotives. Therefore, a logical practice is to install dragging-equipment detectors in approach to the broken-wheel detectors. Considering the increased safety achieved by these broken-wheel detectors at a comparatively small cost, more extensive use on more roads can be expected.

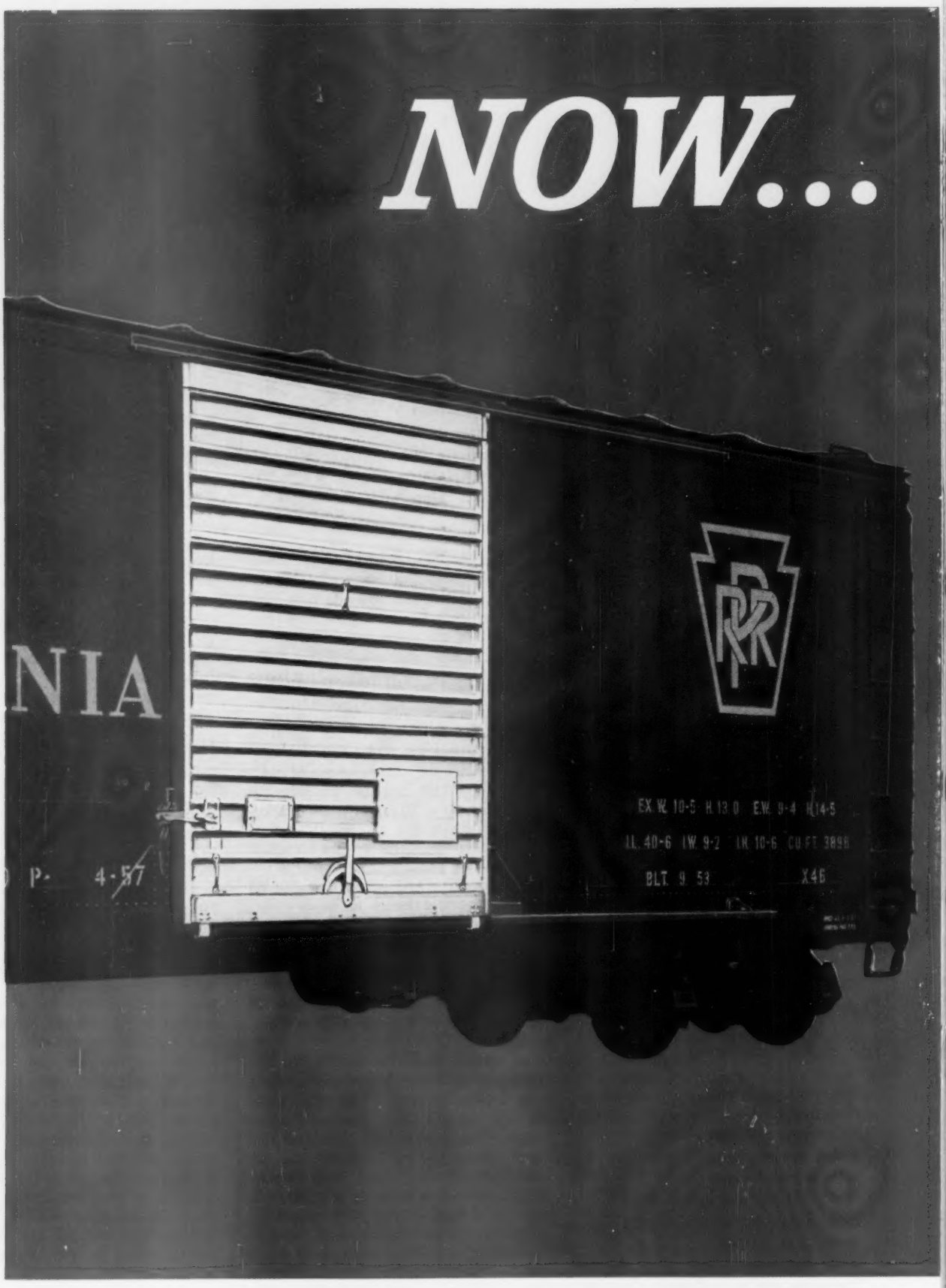
For Hot Boxes

The newest member of the detector family, the infrared ray electronic hot-box detector, described in the April 1 Railway Age, has proved to be an effective and economical means for detecting hot boxes on passing trains. These devices have been in service for 6 months to a year on the C&O, B&M, N&W and Reading. Projects completed recently, or now under way, include one each on the DL&W, Reading, N&W, C&O and Pennsylvania, and two each on the NYC and the Southern.

Boxes that are dangerously hot, but not evident to train crews or railroad employees watching from the wayside, are detected by this device. The B&M located the detectors 30 miles out from a terminal so boxes that are going to heat will have time to reach a temperature to be detected. This B&M project detected 52 hot boxes in five months. In July the C&O installation detected 8 hot boxes, only one of which had been discovered by

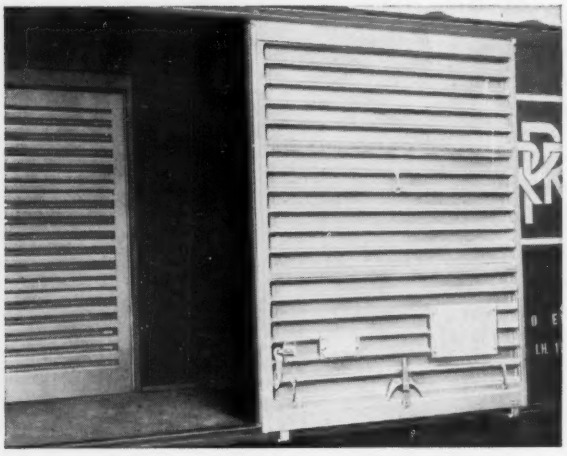
Devices are available for detecting—

- Hot boxes
- Dragging equipment
- Flash-floods and high water
- Broken car wheels
- Wheels loose on axle
- Fire on trestles and bridge decks
- Exact alinemnent of bridge piers
- Earthquake tremors
- Rocks falling on tracks
- Dirt slides and snow slides
- Falling snow and ice


NOW...
NIA
P- 4-57
EX W 10-6 H 13 0 EW 9-4 H 14-5
LL 40-6 IW 9-2 IN 10-6 CU FT 3898
BLT 9 53 X46

aluminum box car doors less than half the weight of steel

Only 256 Pounds in Kaiser Aluminum—Compared to 523 Pounds in Steel!*



The first welded aluminum box car doors to be produced in the United States have now been put into test service on the Pennsylvania Railroad.

These rugged, lightweight doors, designed for PRR by Kaiser Aluminum, offer advantages that are increasingly important in view of the present trend toward larger box car door openings:

Exceptional Weight Advantage. As doors become wider, added weight in steel creates greater problems in door handling. The answer?—*lightweight aluminum* . . . to simplify mounting . . . to assure easy operation.

Strong and Rugged. Strength is achieved through a unique combination of specially designed aluminum extruded door stiles and formed aluminum panels. High strength welded construction is made possible by a new sheet and plate aluminum alloy 5086, an unusually strong, non-heat treatable, easily weldable alloy developed by Kaiser Aluminum.

Permanently Rust Proof. Aluminum cannot rust—eliminates costly maintenance of lower panels. Its remarkable corrosion resistance eliminates need for painting.

A Kaiser Aluminum "Partnership Project"

This is another example of how Kaiser Aluminum is working together with the Railroad Industry on new developments.

We will be pleased to work *with you* as "idea partners" for further development of both new and existing aluminum applications, sharing with you our aluminum fabricating knowledge, engineering skill, cost analysis, design assistance.

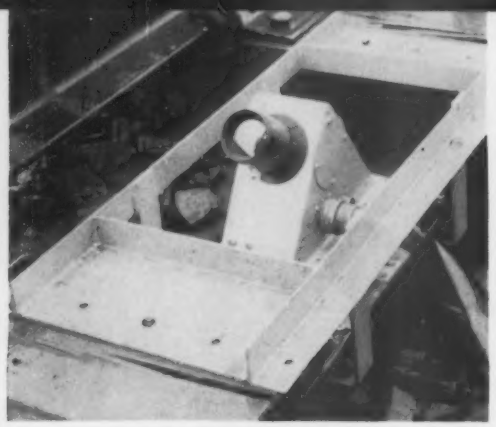
Call the Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc., *Railroad Sales Dept.*, Palmolive Bldg., 919 N. Michigan Ave., Chicago 11, Illinois; *Executive Office*, Kaiser Bldg., Oakland 12, California.

* 8-foot door

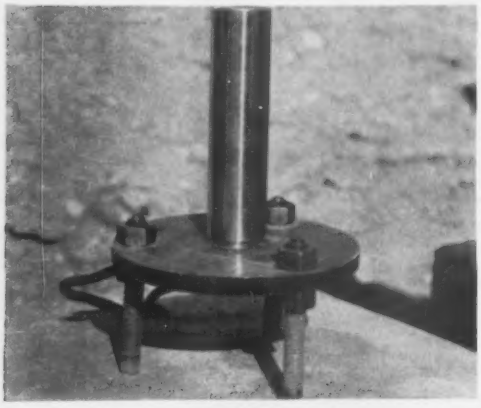
KAISER ALUMINUM

THE BRIGHT STAR OF METALS

SEE "MAVERICK" • SUNDAY EVENINGS, ABC-TV NETWORK • CONSULT YOUR LOCAL TV LISTING



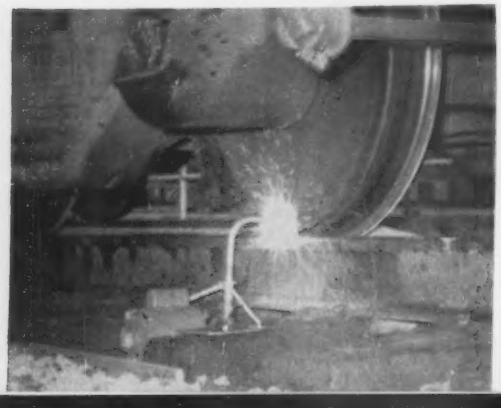
INFRARED RAY hot-box detector, located alongside the rail, checks all boxes on passing train (view without cover).



A SET OF 12 devices like this made of pieces of steel shaft ranging to 6 in. long, detect intensity of earth tremors.

FIRE, on wood trestles or bridge decks is detected by this device consisting of heavy wire with lap solder joints.

PUMP squirts paint on defective wheel when device pictured on this issue's front cover detects a break.



the train cew or the operators at wayside offices.

Other roads have located detectors to check incoming trains as they enter a yard. During about four months one at the Roanoke, Va., yard entrance on the N&W detected 104 boxes which had abnormal temperatures. Because this detector proved to be so effective, in checking for such conditions, this road looks forward to the practicability of omitting journal inspection of cars coming into the yard.

For Floods and High Water

Flood detectors include cork floats which rise with the level of water. By using a long rod from the float up to a controller, this controller can be at a level convenient for inspection. A latch holds the float in the raised position until the signal maintainer or track foreman arrives to check flood conditions.

These flood detectors are installed not only adjacent to bridges and alongside embankments but also at points up stream to detect oncoming rushes of water caused by heavy rainfall in limited areas in hills remote from the railroad. The locations for each detector can be determined from records of rainfall in watershed areas. Some of the roads which use flood detectors are the Santa Fe, SP, Milwaukee, MKT, KCS, CRI&P, MP, T&NO and SP.

For Rocks on Tracks

To detect large rocks that roll down hillsides or fall from cliffs onto tracks, fences including circuit controllers are used. Some roads use ordinary stock fencing with wires loosely stapled at intermediate posts but attached at each end of a section to a cross member which in turn is attached to a circuit controller, tension in the fencing being maintained by springs. Fences are located near the tracks or up the slope as required. Where rocks fall from cliffs, overhead network fences can be used.

These rock detectors have been installed extensively on numerous railroads, including the D&RGW, MP, N&W, SP, SAL, WP, SP&S, and UP. The Clinchfield installed 24,645 ft of these detector fences during 1957. In May 1957, one of these devices on the Missouri Pacific detected a large rock that rolled down and came to rest on the main track. Thus it most certainly prevented a train accident.

At some locations, soft mud slides down from banks onto the track. At such places, some roads use low fences constructed of planks on posts which are jointed at the ground line with sections that break easily. Mercury-level circuit breakers detect any movement of the fence from vertical. A fence to detect snow slides has been used on some roads. When snow pushes against it, a plug is pulled to open a circuit.

For Fires

Fire damage to timber trestles, bridge decks, tunnel linings, and timber snow sheds can result in hazards to trains. Therefore, at such locations several railroads have installed fire detectors.

Typical construction consists of insulated No. 10 copper wire supported on porcelain insulators about 6 ft apart, with a 2-in. soldered lap joint between each set of insulators. The solder melts at a comparatively low temperature: If a fire melts the solder, the weight of the wire opens the joint, thus opening a circuit to operate a detector relay.

For Snow and Cold

A special device, that detects falling snow and rain at freezing temperatures, can be installed at outlying locations to transmit such information to the nearest open office or to the dispatcher.

Also this device meets another need. Not enough track men are available these days to sweep snow from switches at outlying locations. Some roads have installed heaters to melt the snow in switches, and others use motor-driven blowers. These blowers or heaters are controlled by the dispatcher as part of the CTC.

A missing link is that snow heavy enough to block switches may fall at remote locations in CTC territory without the dispatcher knowing about it. To meet this need, railroads can now utilize the new device that automatically detects precipitation when the ambient temperature drops below 37 deg F. Snow or ice forming on the "bowl" (top) of the unit is melted, and thus completes a circuit to a relay which can control the switch heater or blower, as well as send an indication to the dispatcher. When snow or ice ceases to fall on the detector, the circuit is opened, thus turning off the heaters or blowers, and sending an indication to the dispatcher.

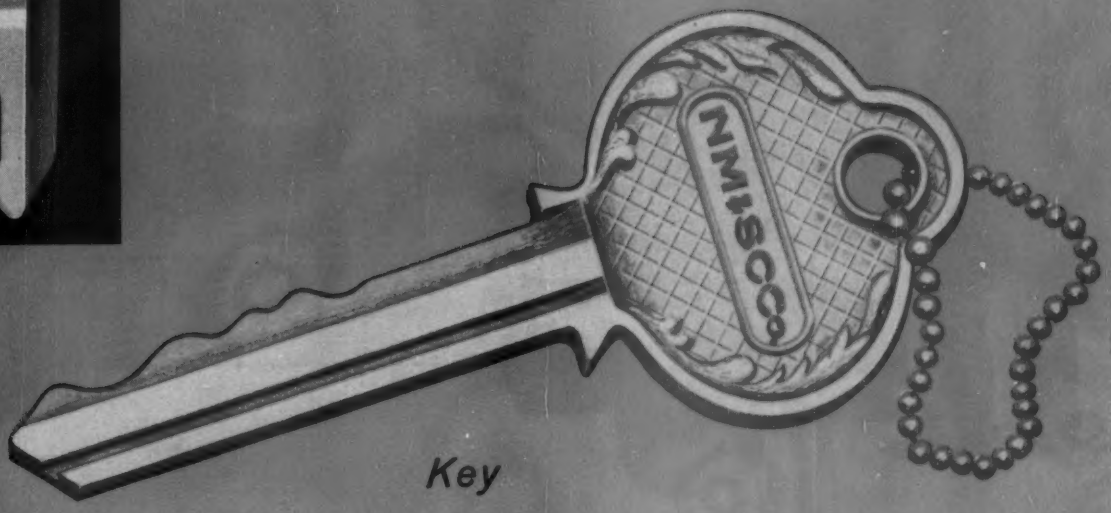
For Bridge Position

A device which detects fog has been developed recently. The basic principle is that of measuring the amount of light reflected from water particles suspended in the atmosphere. The manufacturer states that the device will detect mist, fog, heavy rain or snow.

Even with the best of construction, some bridge piers in streams may settle

(*Continued on page 28*)

THE WEDGE



Key

to lower maintenance in

NATIONAL C-1 TRUCKS

In National C-1 Trucks, longer wedge life results from design of the friction mechanism itself, and the special analysis materials of which the wedge and wear plate are made.

Actual service records on leading railroads prove that National C-1 Truck Wedges are still in prime condition—even after traveling the equivalent of 8 times around the world.

NATIONAL
SPECIALTIES

COUPLERS
YOKES
DRAFT GEARS
FREIGHT TRUCKS
JOURNAL BOXES

NATIONAL MALLEABLE AND STEEL CASTINGS COMPANY

Established 1868

LEARN TO PROGRESS
P R I
MEMBER

Railway Division Headquarters
Cleveland 6, Ohio

International Division Headquarters
Cleveland 6, Ohio

CANADIAN SUBSIDIARY
National Malleable and Steel Castings Company of Canada, Ltd.
Toronto 1, Ontario

AA-0000

Hertz rent it here

Now...at no

What's in it for the railroads?

More satisfied passengers. More passenger dollars. More repeat business. That's what's in Hertz' nation-wide "Rent it here . . . Leave it there" service for the railroads!

Here's why. Today, more and more of your passengers recognize the time-saving convenience of going by fast, comfortable train, instead of driving their own cars. They know that at their destination, they can rent a new Turboglide Chevrolet Bel Air or other fine Hertz car, drive it to the farthest city on their route, *leave the car there at no extra charge**—and continue on their way by train. It's Hertz service like this that's helping bring people back to train travel . . . and knocking out the competition of inter-city motorists. In fact, today, it's the preferred way to travel, judging by the volume of repeat business for both of us.

How is this nation-wide service being sold? First, by Hertz' big advertising program. Millions of readers of leading magazines

...leave it there!

extra charge!*

are urged to get The Hertz Idea—to go by train, to use Hertz "Rent it here . . . Leave it there" service. Next, by your ticket agents. Hertz pays them a 10% commission on the total rental fee for every Hertz reservation they make. Now, because Hertz "Rent it here . . . Leave it there" service encourages longer trips, ticket agents are making more and bigger commissions! And too, "Rent it here . . . Leave it there" displays are seen by your passengers at Hertz counters in terminals across the country.

Now, you can see what's in it for you . . . and what's being done. There's money in it for you—and for us. But the selling job isn't complete without you. That's why we say: mention the Idea in *your* advertising—this passenger-pleasing idea of renting a car *there!* Hertz Rent a Car, 218 S. Wabash Ave., Chicago 4, Ill.

More people by far...use

HERTZ

Rent a car

***Between Hertz cities on rentals of $25 or more. For Chevrolet sedans and comparable models only.**

CORK FLOAT at bottom is raised by flood thus operating a controller at the top, thereby detecting high water.

FALLING SNOW or freezing rain operates this automatic detector. Rods extending up prevent birds from alighting.

(*Continued from page 24*)

out of alinement. This may change the relative position of the end girders and the abutment piers. To check these conditions, some roads have installed detectors. The device includes a heavy pendulum which normally hangs vertically. If it swings off center, it breaks a short strand of fine wire, thus initiating a warning.

To check the normal position of a girder, a terminal on the end of this girder is connected by a fine wire to a second terminal directly opposite on the face of the masonry of the pier. The wire will be broken if the girder moves away from the pier more than 1 in. in excess of normal contraction. A relative change of horizontal alinement can likewise be checked.

In areas where earth faults are known to have caused earthquake tremors in recent years, one road uses the bridge-position detector as explained above. Although there has been no damage to railroad tracks and structures, in one danger area a means of recording the intensity of tremors, and informing the dispatcher when such tremors occur, seemed desirable. Therefore, signal department forces developed and installed devices that detect 12 different ranges of intensity and transmit information accordingly to the dispatcher.

How Detectors Control Signals

Having detected a hazardous condition on the track or a defect on a car in a passing train, the next problem is to give this information to the engineer so that he can stop his train. This objective is readily obtained by arranging circuits so that operation of a detector indirectly controls a wayside signal to display an aspect to direct the engineer to stop his train.

In some installations, existing signals at interlockings or in automatic block are used. Where no such signals are available, some roads are using a special flashing-lunar aspect on a wayside mast which indicates "stop train for inspection." The hot-box or dragging equipment may be on any car in a train, therefore, the detector should be located, in approach to the flashing-lunar signal, a distance equal to the length of the longest train plus approximately 1,000 ft sighting distance from the locomotive to the signal. The use of such a single signal, with no approach aspect, is based on the fact that the flashing-lunar aspect does not mean that the train must be stopped short of that signal, but rather that the engineman is to stop his train as soon as he can do so with safety, i.e., without applying the brakes in emergency.

Using Existing Signals

In connection with devices which detect hazards on tracks and bridges, such as washouts, floods, fire, and falling rocks, the signals that are to be controlled are located to stop trains before arriving at the hazard. In many instances, existing automatic signals can be used.

On the SP each such signal has a special rectangular marker which designates that the control of each signal so marked includes not only the conventional automatic block controls but also special detector devices. If the engineman and conductor do not already know what the devices are, as applying to a signal at which they are stopped, the information is given in the timetable. Then they look for the corresponding rock on the track, washout, etc. Telephones connected to the dispatcher's line are located at these signals so that conductors can advise the dispatcher of the condition.

What to Do Now

Need for action in this matter has been brought about by reduction in the number of men who watch for hazardous conditions on railroad tracks and on passing trains. Opportunity to use any or all of the ten forms of detectors that have proven satisfactory is a further consideration.

With one exception, the detectors are comparatively inexpensive in first cost and maintenance. Roads which up to now have not installed these protective devices can easily make a few trial installations of each type soon, and thus secure information on which to base decisions about extensive programs.

A complete analysis of numerous local circumstances and number of trains is required when planning an extensive program. Locations for falling rock detectors are obvious. Detectors for flash-floods and high water can be located according to watershed area and short-period record rainfall. Dragging-equipment detectors are applicable in approach to all important bridges and tunnels, as well as in approach to junctions or turnouts 25 to 30 miles apart on medium traffic lines or 10 miles apart on heavy traffic lines.

Hot-box detectors may be located at the entrance to yards, and at points 25 to 30 miles from a departure yard, so that journals which are in condition to heat will have time to get hot in that distance. Experience may indicate more locations. Broken-wheel detectors can be located at entrances to yards and at junctions or other places on line of road where train speeds are restricted to 20 mph.

Installation of these safety devices is not going to accomplish a determinable reduction in operating expenses, such as 25 per cent or 50 per cent. No one can figure the expense for an accident that was prevented. On the other hand, practically every road has data on the expense involved in wrecks during years past.

[Descriptions of various forms of detectors discussed here, as well as the operation of signals in connection with detectors, have been published in Railway Signaling & Communications, a Simmons-Boardman publication. A list of references will be furnished on request to John H. Dunn, signaling editor of Railway Age, 30 Church st., New York 7, N.Y.]

"ALL" aboard ?
WHEN THE TRAIN CREW
OUTNUMBERS THE PASSENGERS . . .
On 15% of the trains operated last year on the Adirondack Branch of The D. & H. (Saratoga Springs to North Creek) the crew of five men outnumbered the passengers. Indeed, on 8% of the trains no passengers whatsoever were carried. For the entire season, June 16 to September 9, the patronage averaged only 16 passengers per train.
The phenomenal growth in the number of private automobiles since the end of World War II is primarily responsible for this loss of patronage. In Saratoga and Warren counties where these trains operate, the per capita ownership of automobiles is among the highest in the State, averaging about one car for every three people. In addition, three certificated bus lines operate in this territory.
And so, after more than a fair trial and in the face of constantly dwindling patronage, we have reluctantly asked the Public Service Commission to permit the discontinuance of this service. There can be no justification for continuing the heavy losses sustained in this so lightly patronized and little needed service. We believe the money thus saved can be used to better advantage in preserving the railroad as a vital force in the broader welfare of the communities it serves.
DELAWARE & HUDSON RAILROAD
CORPORATION

"the D&H" .....and the Communities it serves.
In 1823 "The President, Managers and Company of the Delaware and Hudson Canal Company" was chartered by the Legislature of the State of New York for the purpose of building a canal connecting the Delaware and Hudson rivers. The canal was constructed from Honesdale, Pa., to Roundout, N. Y., and brought low cost transportation of coal from the rich anthracite fields of Pennsylvania to the eastern seaboard.
Six years later, on August 8, 1829, the "Stourbridge Lion", purchased in England by The D. & H. made its trial trip near Honesdale, thus being the first steam locomotive to be operated in America.
From these ambitious and far-reaching beginnings The D. & H. evolved into the present railroad system, extending from Wilkes-Barre, Pa., and Binghamton, N. Y. through the Susquehanna, Hudson and Champlain valleys to Montreal, Canada. It not only serves this industrially rich and strategic section of our country, but it has become one of America's most important bridge lines, connecting the South and West with New England and Eastern Canada. In this bridge line operation The D. & H. serves as a giant link, transporting over its lines entire freight trains received from and delivered to connecting railroads. This type of freight neither originates at nor is consigned to stations on The D. & H.
Almost half of its gross earnings comes from this bridge line service. Thus, the operation and maintenance of a railroad to perform this type of service gives to The D. & H. a unique position in the economic well-being of the communities it serves, for it means a bigger and stronger railroad, with more employees, larger payrolls and greater local expenditures than would be the case if its operations were limited to purely local patronage.
We are indeed happy to be in a position to contribute such a favorable trade balance to our local communities, and in a series of advertisements to follow we will tell you more about the fascinating story of our railroad and the important public service it is privileged to render.
DELAWARE & HUDSON RAILROAD
CORPORATION

SLANTING ADS TO ON-LINE COMMUNITIES HELPS . . .

D&H Public Relations Pay Off

A big bridge-line business with relatively few on-line contacts and light passenger revenue for years led the D&H management into assuming that it had no particular public relations problems. But when a number of D&H proposals requiring public approval were rejected, the line had to face the fact that it had not only one but several publics and that a public relations program was needed to deal with them effectively. A new and complete PR program was mapped out.

"Understanding is the key word," Vice-President J. P. Hiltz, Jr., says in talking about the D&H program. "Our motives were not understood before, and we suffered from it." The D&H wants its neighbors—employees, customers, shareholders, municipal and state legislative officials, and the general public—to understand why it does what it does. If improved public relations also brings in more business or improves employee morale, these additional benefits are welcome. The main goal, though, is understanding.

On the Delaware & Hudson, public relations is a responsibility of the vice-president—operations and maintenance, Mr. Hiltz. He and his staff have managed to take on the additional PR duties by limiting their responsibility for public relations to direction of the program. By contract with the Fay Advertising Agency of Albany, the mechanics of the business are handled by B. T. Fay, who reports directly to Mr. Hiltz.

A space advertising campaign in newspapers; direct mailings of ad preprints; a magazine and regular letters for briefing employees on company news and policy; special mailings to the general public on topics of interest to residents of on-line communities; a task force community relations program composed of men respected in their localities who can present the railroad's story effectively at lunches or special meetings; a billboard campaign for railroad trucks and advertising messages painted on the company overpasses; a new policy for getting news about the

ALL ABOARD !!
MANY ARE CALLED...
but few get aboard!
Aboard Trains 3, 4 and 14, that is . . . providing part of our local service between Albany and Whitehall.
And it isn't difficult to understand why. We have lost out to the ever increasing number of private automobiles operating on free State highways that parallel our railroad.
Patronage on Train No. 3, operating daily between Albany and Whitehall, on Train No. 4 operating weekdays between Whitehall and Albany, and on Train No. 14, operating Sundays only between Whitehall and Albany, has slipped to a point where the number of people riding these trains simply come nowhere near meeting the expenses of operation. For instance, in the fall, winter and spring of 1955-56 we carried an average of only 11 passengers per train in this service, most of them riding but short distances.
We believe the heavy and wasteful losses incurred in providing this so lightly patronized service should be stopped, and the money thus saved applied to projects that will preserve the Railroad as a vital force in the broader welfare of the communities it serves.
Therefore, effective October 28, and continuing for the fall, winter and spring months, we will continue the service provided by these trains with our Laurentian, Trains 34 and 35. The arrival and departure time of the Laurentian is reasonably close to the schedule of the trains to be discontinued, so that service will not be impaired. It will provide Laurentian service to the local stations between Whitehall and Albany and with the four other trains operated daily in each direction between these stations will adequately meet the real rail transportation requirements of these communities.
We will restore these trains for summer operation in 1957.
Your understanding of and cooperation with this necessary seasonal change is respectfully solicited.
DELAWARE & HUDSON RAILROAD
CORPORATION

ADS HELPED sell train-off.

railroad distributed to the media of public information that can use it—all of these make up the road's new public relations program.

Except for the periodic letters to the employees, which were established earlier, all of this activity has come into being in the last year and a half. Results under the new program compared with results before it went into effect, prove to the D&H that the public relations program is working.

Employee Relations

An employee relations program was the first step, because employees are the contact group of the railroad that the public sees and forms its impressions by. The D&H keeps its employees informed through two main channels. One is the "Fellow Employees Letter," from Mr. Hiltz to all personnel, in which facts about the road are discussed or management policies explained. Each is devoted to a single topic. Letters, issued as circumstances require, have gone into a variety of subjects, such as the reason for maintaining a police department, an account of new track construction methods, rent received from tenants in the D&H Albany office building, and a discussion of the proposed merger of the D&H, Erie, and Lackawanna. The letters are frank and precise. They don't hedge or fumble, and they have an enormous readership, sometimes going beyond employees. A letter concerning new glued rail joints, for example, was picked up by a local newspaper, which passed the story on to the Associated Press and the New York Times.

A further development of the employee information program is "D&H Briefings," a monthly mimeographed bulletin designed to give supervisory personnel information they need to better perform their supervisory duties. This "flash" report gives estimated operating results, information on any development which has or might have an effect on operations, operating comparisons with neighbor roads; occasional news of more or less confidential nature.

Part of the program is a campaign to make railroad people better known in online communities through company-sponsored parties. Once introduced to a community, D&H men are urged to take part in its activities through service clubs, charities, fraternities, community committees, social organizations, and similar groups.

Community Relations

The D&H has an active community relations program in which selected employees sit down with representative groups in a community. The meetings discuss the railroad's relations with these groups and show how the railroad's problems affect the whole community. Employees who take part in the community relations programs are picked for their knowledge of the overall railroad situation and are given special training in communicating their information to others. The program roughly parallels the efforts of the Eastern Railroad Presidents Conference Railroad Community Committees.

Part of the D&H public relations program is advertising in local newspapers. In this series the D&H explains what its purposes are, how it accomplishes these purposes, and how its activities relate to the social and economic activities of the area as a whole. Several ads have appeared in this series. Only one so far, an ad dealing with automatic crossing gates as part of a safety program, has had any tie-in with immedite goals of the railroad. This is intentional; the series is planned as institutional advertising designed to promote understanding.

All of the points at which the railroad makes contacts with the public are being reviewed. The traffic department has a new system map showing service and connections. The company's old-fashioned letter head has been brought up to date. D&H maintenance trucks carry a large colored poster urging "Ship by the D&H for Dependable, Hi-Speed Service." Overpasses are being repainted to carry advertising messages. The D&H program even has something for railroad fans, a sizable group generally eager to help railroad public relations.

Emergency News

The agency handles ordinary news releases. Under the new policy for dealing with emergency news, specific officers for each of several areas are designated as railroad spokesmen for any happenings in their territory. Alternate spokesmen are also designated to make certain that someone to speak officially for the railroad will be available at all times. If an accident or some other newsworthy story happens, the railroad works to get the known facts to all media in time to meet news deadlines. The railroad spokesmen are required to deal in facts only.

The goal of the program is to improve the railroad's position in emergency situations by giving the press the information it has a right to expect and giving it with official sanction. The intention of the new policy is not to restrict the flow of information to the public but to increase it and assure its accuracy.

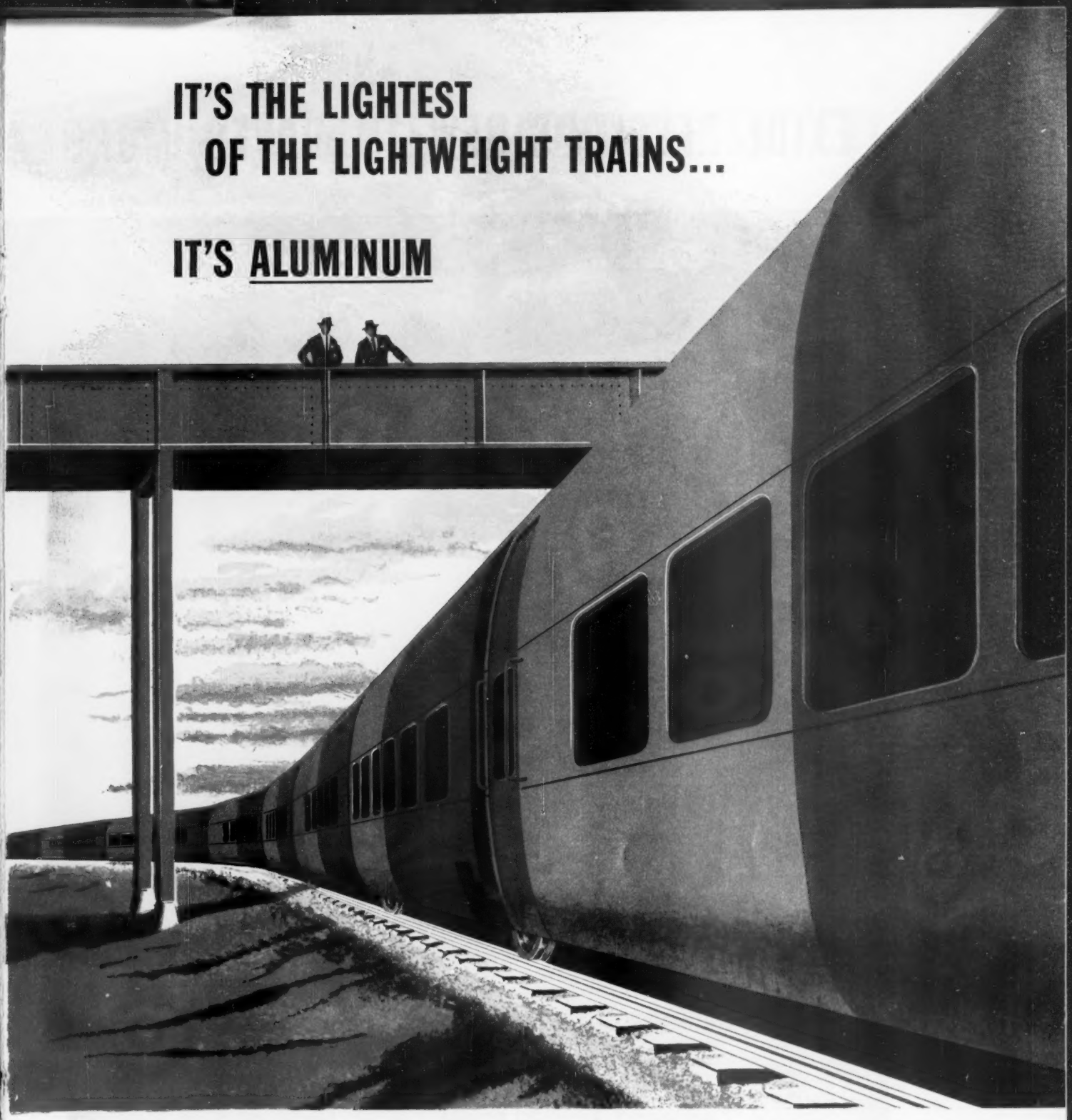
Public acceptance of the PR program has been good. Like many other roads with branch-line operations, the D&H suffered serious losses from unpatronized trains. In 1955, before the PR program was in effect, an effort was made to get approval from the New York Public Service Commission for abandoning passenger service on the Adirondack branch. Howls of protest went up from the communities involved, even though the facts clearly proved that the communities' chief loss would be in their civic pride. The outcome: the PSC would not even schedule a hearing, and passenger trains to North Creek remained as a drag on the company's operations.

When the D&H made its second effort to get rid of these trains, in 1956, the PR program laid the groundwork. Task forces, consisting of the division superintendent and other officers known and respected in the towns affected, were sent out to explain the railroad's problem to businessmen, chambers of commerce, newspapers, and other interested groups. An advertising campaign (separate from the institutional advertising series) was run in local newspapers. When the railroad again brought up its request to drop the service, the PSC granted a hearing. There was almost no opposition and the decision was favorable to the D&H.

After a full year and a half with this public relations program, D&H men wonder how they operated without it.

IT'S THE LIGHTEST OF THE LIGHTWEIGHT TRAINS...

IT'S ALUMINUM



Train X, now in service as the NYC "Xplorer" and NYNH&H "Dan'l Webster," has one-third the weight of conventional equipment. It's the all-aluminum train, the lightest of the new lightweight trains. The skin is Alcoa® Aluminum, the superstructure framing is Alcoa Aluminum, interior appointments and panels are Alcoa Aluminum. Even the *underframe*, which will resist a compressive force of 800,000 lbs, is Alcoa Aluminum.

For equal strength, aluminum weighs only one-third as much as steel; for equal stiffness, half as much. This light weight made the Train X concept possible. For example, it permitted the single-axle design (without excessively short cars) which enables Train X to snake around curves at high speeds.

Progressive railroaders are using more and more light, strong, rustfree Alcoa Aluminum—for new lightweight trains, tank cars, boxcar and baggage car doors, crossbucks and wayside signs, freight and passenger stations. Get more information. Write: Aluminum Company of America, 2180-Y Alcoa Building, Pittsburgh 19, Pa.

ALCOA ALUMINUM

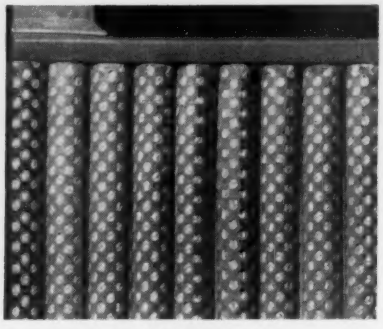
YOUR GUIDE TO THE BEST IN ALUMINUM VALUE

EXIDE DEVELOPS NEW, IMPROVED, MORE

Photo courtesy Reading Railroad

New MGD Exide-Ironclad Battery for diesel locomotives. Designed to conform with recommended practices of Association of American Railroads.

ADVANCED TUBULAR CONSTRUCTION— DEVELOPED OUT OF RESEARCH STARTED 15 YEARS AGO



Armored porous tubing. Provides resistance to shedding and effects of vibration, improved flexibility, and maximum retention of active material. Thousands of tiny openings mean . . .

ECONOMICAL DIESEL LOCOMOTIVE BATTERY

New MGD Exide-Ironclad Battery design unlocks more power from battery space—gives you increased savings on investment and operations

Now Exide-Ironclad diesel locomotive batteries are thriftier than they ever were. Always famous for long life and high performance, now they offer improvements that mean even higher capacity per dollar.

Exide has achieved these new benefits for diesel locomotive users by taking full advantage of the extremely high permeability of the armored porous tubing and its improved active material retention characteristics. This highly permeable tubing, made of braided glass fibers within a perforated polyvinyl chloride armor, acts like a highly efficient filter, preventing practically any loss or shedding of active material. Yet the high porosity enhances contact between electrolyte and active material—significantly improving battery performance.

How you benefit

The new MGD battery packs more power per plate than other diesel locomotive batteries. It gives you a 50% increase in amperes discharged at diesel engine cranking rates even over previous model Exide-Ironclad Batteries.

The MGD is available in two sizes: 280 and 420 ampere-hours at the 8-hour discharge rate. In both, concentration of battery power reduces the space required. The MGD-19 (420 ah capacity) battery normally used in large road locomotives is now available within the dimensions of batteries furnished in smaller switching locomotives without sacrifice in cranking, standby performance and life. This means new versatility and the possibility of reducing the number of sizes of batteries needed.

Same Exide-Ironclad quality features

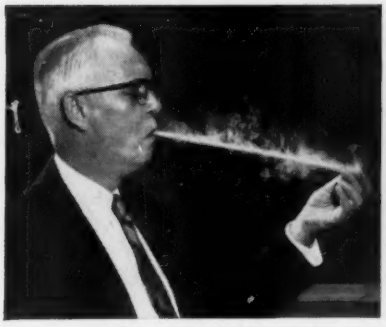
With all these improvements and new battery economies, you still get the quality features that contribute so much to the proven performance of Exide-Ironclad Batteries: heavy copper inserts in terminal posts and cell connectors to insure high sustained voltage during cranking; large electrolyte reservoir above plates to reduce watering requirements; ample sediment space in bottom of jar for long life; rugged molded rubber container built to withstand locomotive operation and provide for reduced maintenance.

Discover how much you can save

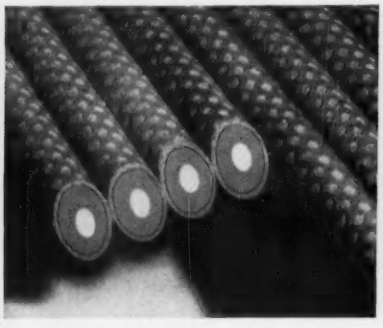
Learn how much you can benefit from the advantages this battery offers. Call your nearby Exide representative. Or write for complete information. Dept. MG, Exide Industrial Division, The Electric Storage Battery Company, Philadelphia 2, Pa.

Exide®

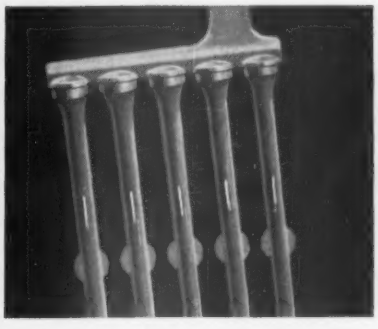
THE ELECTRIC STORAGE BATTERY COMPANY



Greater porosity. Highly permeable tubes ease current flow, reduce internal resistance, improve access of electrolyte for superior performance under heavy loads. Each plate delivers more power. Tubes hold . . .



More active material. Chief source of battery power. Larger inside diameter of tubes means every positive plate contains more active material per cubic inch of plate. You get all this . . .



Plus Silvium,* Exide's patented grid alloy—proved more corrosion resistant than any other grid alloy. Tests prove conclusively that Silvium prolongs battery life.

**U.S. Patent*

Freight Operating Statistics of Large Railways—Selected Items

Region	Road	Year	Miles of road operated	Train miles	Locomotive Miles: Principal and helper	Locomotive Miles: Light	Car Miles: Loaded (*thousands*)	Car Miles: Per cent loaded	Ton-miles (*thousands*): Gross excl.locos & tenders	Ton-miles (*thousands*): Net rev. and non-rev.	Road-locos on lines: Serviceable: Unstored	Road-locos on lines: Serviceable: Stored	Road-locos on lines: B.O.	Road-locos on lines: Per cent B.O.
New Eng. Region	Boston & Maine	1957	1,560	230,904	231,645	5,484	9,133	64.8	614,014	259,330	75	3	3	3.7
		1956	1,561	237,284	241,555	7,925	9,172	68.0	591,932	245,276	67	..	1	1.5
	N. Y., N. H. & Htfd	1957	1,739	270,750	270,750	19,170	11,276	65.8	737,557	310,506	92	..	7	7.1
		1956	1,746	254,727	254,737	22,617	11,235	68.6	698,879	286,930	84	..	11	11.6
Great Lakes Region	Delaware & Hudson	1957	771	169,316	174,845	6,443	9,427	69.9	662,363	353,809	38	..	2	5.0
		1956	771	180,764	185,741	6,210	9,913	71.5	682,980	364,072	40	..	4	9.1
	Del., Lack. & Western	1957	927	255,596	263,735	20,164	11,996	69.7	779,838	339,000	62	..	1	1.6
		1956	962	292,881	302,938	21,882	12,554	70.4	813,207	360,262	62	..	1	1.6
	Erie	1957	2,207	614,199	617,348	15,119	33,707	68.3	2,108,371	826,062	173	..	..	..
		1956	2,207	610,802	616,373	18,926	33,537	70.8	2,040,353	826,834	168	..	3	1.8
	Grand Trunk Western	1957	951	221,141	228,523	1,573	7,308	59.5	525,848	202,860	55	14	14	16.9
		1956	951	275,404	279,887	2,160	8,302	59.8	602,867	248,788	57	..	20	26.0
	Lehigh Valley	1957	1,133	228,047	231,300	4,477	10,456	67.4	720,937	341,753	31	..	3	8.8
		1956	1,135	229,545	232,929	7,878	10,992	65.6	775,715	366,954	33	..	2	5.7
	New York Central	1957	10,570	2,135,286	2,162,136	113,502	91,797	59.7	6,703,227	2,967,314	489	2	34	6.5
		1956	10,565	2,248,143	2,282,174	126,982	96,191	62.3	6,887,912	3,122,741	504	36	42	7.2
	New York, Chic. & St. L.	1957	2,155	696,688	712,242	5,059	31,151	66.3	2,166,903	976,553	159	14	18	9.4
		1956	2,155	726,430	752,036	8,357	31,210	65.7	2,208,527	997,036	188	1	20	9.6
	Pitts. & Lake Erie	1957	221	64,387	64,387	....	2,915	67.5	257,537	162,533	14	..	1	6.7
		1956	221	57,119	57,119	....	2,602	68.9	237,043	147,952	11	..	3	21.4
	Wabash	1957	2,379	535,360	536,516	6,611	23,972	63.9	1,606,120	620,464	112	..	..	..
		1956	2,381	498,649	500,405	6,059	22,085	66.4	1,475,120	600,342	110	..	1	.9
Central Eastern Region	Baltimore & Ohio	1957	5,896	1,541,212	1,703,957	140,619	65,248	61.4	5,255,900	2,598,090	477	29	53	9.5
		1956	5,910	1,653,691	1,854,486	177,156	67,315	62.9	5,390,014	2,715,472	477	6	78	13.9
	Bessemer & Lake Erie	1957	208	65,272	72,552	198	3,392	60.4	413,486	271,552	16	..	..	..
		1956	208	36,760	37,331	52	1,447	69.2	159,199	106,086	15	..	..	..
	Central RR Co. of New Jersey	1957	612	124,120	125,466	6,645	4,900	65.2	368,476	192,173	67	..	2	2.9
		1956	612	138,112	139,317	6,427	5,138	65.6	395,256	209,853	65	..	2	3.0
	Chicago & Eastern Ill.	1957	862	119,426	119,426	3,486	5,616	65.0	392,266	202,139	29	..	3	9.4
		1956	868	118,437	118,437	2,732	5,283	67.5	383,109	192,622	26	..	3	10.3
	Elgin, Joliet & Eastern	1957	236	84,574	85,190	....	2,523	63.2	206,684	112,528	36	2	5	11.6
		1956	236	79,157	79,551	....	2,430	64.2	195,582	106,040	32	6	2	5.0
	Pennsylvania System	1957	9,914	3,062,760	3,272,916	260,617	133,964	66.4	9,929,809	4,891,892	867	37	204	18.4
		1956	9,892	3,018,166	3,240,605	255,884	132,748	68.1	9,653,172	4,821,851	872	7	333	27.5
	Reading	1957	1,303	357,741	359,784	12,724	13,229	62.9	1,091,060	585,766	161	19	7	3.7
		1956	1,303	357,402	359,437	10,831	13,531	65.8	1,089,633	598,393	158	4	24	12.9
	Western Maryland	1957	846	168,763	173,774	8,148	6,847	64.7	589,431	342,738	53	..	..	..
		1956	846	172,530	178,896	9,798	6,968	63.4	589,339	335,334	41	..	..	..
Pocahontas Region	Chesapeake & Ohio	1957	5,067	1,609,198	1,615,570	32,101	76,974	57.2	6,974,997	3,966,850	629	3	77	10.9
		1956	5,067	1,627,892	1,654,115	50,177	73,271	57.5	6,522,956	3,710,884	512	9	91	14.9
	Norfolk & Western	1957	2,110	759,725	831,128	68,376	42,160	57.8	4,042,597	2,270,864	242	11	11	4.2
		1956	2,110	793,121	861,910	75,643	39,829	59.1	3,796,896	2,128,464	230	6	14	5.6
Southern Region	Atlantic Coast Line	1957	5,283	684,669	684,678	8,321	23,429	61.0	1,747,690	808,249	108	29	2	1.4
		1956	5,283	817,760	817,760	9,284	24,530	60.4	1,833,456	841,360	177	..	7	3.8
	Central of Georgia	1957	1,730	188,737	188,737	1,881	8,117	66.8	586,303	289,513	34	..	1	2.9
		1956	1,731	198,514	198,514	2,248	7,947	67.6	560,062	272,540	32	..	2	5.9
	Gulf, Mobile & Ohio	1957	2,717	269,323	269,323	107	15,147	68.7	1,045,974	509,476	86	..	5	5.5
		1956	2,717	276,156	276,156	152	15,280	70.2	1,029,212	492,845	83	..	8	8.8
	Illinois Central	1957	6,502	1,133,428	1,133,428	32,064	50,234	62.9	3,675,977	1,726,666	243	68	61	16.4
		1956	6,503	1,214,007	1,214,447	35,440	51,302	62.9	3,775,507	1,785,236	314	8	117	26.7
	Louisville & Nashville	1957	4,702	905,052	907,005	15,452	34,203	61.9	2,633,654	1,370,181	135	..	6	4.3
		1956	4,714	902,407	904,679	15,016	34,139	63.5	2,577,198	1,345,175	171	22	14	6.8
	Nash., Chatt. & St. Louis	1957	1,043	158,270	161,127	3,315	5,211	71.6	341,580	164,655	43	..	3	6.5
		1956	1,043	169,310	172,530	3,466	5,620	71.7	369,837	179,635	50	..	3	5.7
	Seaboard Air Line	1957	4,049	578,746	578,746	1,084	22,646	61.1	1,659,372	757,676	140	..	6	4.1
		1956	4,051	595,808	595,808	767	22,909	62.9	1,650,240	770,376	138	..	8	5.5
	Southern	1957	6,251	865,455	865,515	10,707	41,416	68.4	2,738,586	1,294,666	178	..	11	5.8
		1956	6,259	908,839	908,909	12,228	43,477	68.7	2,848,558	1,339,077	188	5	6	3.0
Northwestern Region	Chicago & North Western (*)	1957	9,252	964,248	964,248	9,745	35,367	60.8	2,745,872	1,114,061	185	..	9	4.6
		1956	9,334	843,174	844,143	10,169	36,385	65.7	2,589,065	1,100,736	186	3	12	6.0
	Chicago Great Western	1957	1,437	137,168	137,168	192	7,842	66.0	552,886	256,333	31	..	1	3.1
		1956	1,437	140,330	140,330	193	8,218	71.8	549,407	266,489	31	..	1	3.1
	Chic., Milw., St. P. & Pac.	1957	10,607	1,080,790	1,097,995	18,106	47,888	59.5	3,509,544	1,515,416	292	..	11	3.6
		1956	10,633	1,101,979	1,121,182	20,006	48,858	63.0	3,386,443	1,481,008	291	2	11	3.6
	Duluth, Missabe & Iron Range	1957	566	167,738	168,254	801	8,136	51.2	871,329	535,108	70	3	7	8.8
		1956	569	93,998	94,379	627	3,940	54.2	387,625	240,405	72	4	10	11.6
	Great Northern	1957	8,273	1,218,280	1,223,353	25,441	50,302	62.1	3,968,312	1,966,797	252	60	13	4.0
		1956	8,274	1,289,829	1,295,338	43,585	51,982	65.4	3,978,374	2,018,240	269	38	17	5.2
	Minneap., St. P. & S. Ste. M.	1957	4,169	471,421	473,454	2,275	15,367	61.0	1,130,961	513,688	85	8	6	6.1
		1956	4,171	430,428	433,360	2,932	15,876	65.8	1,110,126	531,479	81	10	5	5.2
	Northern Pacific	1957	6,534	907,433	918,818	19,994	38,717	61.5	2,802,826	1,227,366	256	51	10	3.2
		1956	6,569	932,267	948,017	27,486	41,649	67.3	2,851,057	1,304,043	255	59	26	7.6
	Spokane, Portland & Seattle	1957	944	151,645	151,645	1,436	7,004	74.6	461,433	209,058	56	..	..	..
		1956	946	162,028	162,028	1,540	7,579	76.1	515,162	261,797	53	..	..	..
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1957	13,172	2,408,817	2,584,285	52,114	110,996	64.3	7,641,567	2,900,067	572	15	91	13.4
		1956	13,124	2,394,448	2,492,063	45,851	109,234	65.0	7,439,631	2,900,140	555	48	56	8.5
	Chic., Burl. & Quincy	1957	8,728	1,163,660	1,159,978	27,355	51,744	63.8	3,657,619	1,539,161	164	28	31	13.9
		1956	8,771	1,172,775	1,169,116	25,355	53,580	67.6	3,511,596	1,522,901	211	39	31	11.0
	Chic., Rock I. & Pac.	1957	7,576	982,421	978,363	3,189	38,222	61.9	2,807,810	1,226,463	176	..	10	5.4
		1956	7,580	947,874	944,584	1,064	37,355	65.4	2,635,266	1,162,389	167	..	7	4.0
	Denver & R. G. Wn.	1957	2,155	343,085	368,528	32,314	16,947	68.7	1,183,948	556,568	89	4	2	2.1
		1956	2,155	334,581	359,346	41,222	17,385	73.2	1,147,564	536,818	86	12	4	3.9
	Southern Pacific	1957	8,036	2,299,927	2,393,509	152,444	106,909	63.1	7,421,124	2,939,074	707	96	29	3.5
		1956	8,044	2,321,280	2,420,370	163,887	107,649	63.3	7,452,589	2,953,090	706	44	86	10.3
	Union Pacific	1957	9,786	2,545,113	2,613,346	110,587	121,174	62.1	8,416,561	3,395,014	435	31	71	13.2
		1956	9,797	2,578,472	2,643,580	107,216	116,972	62.5	7,950,285	3,141,608	434	21	102	18.3
	Western Pacific	1957	1,190	265,368	286,828	12,318	12,389	66.7	830,677	360,739	47	..	..	..
		1956	1,190	257,179	273,120	10,693	11,914	71.2	751,310	329,115	47	..	..	..
Southwestern Region	Kansas City Southern	1957	886	141,566	141,568	182	8,342	67.3	597,068	270,770	26	..	1	3.7
		1956	886	142,642	142,644	183	8,770	69.7	616,907	286,056	25	..	1	3.8
	Louisiana & Arkansas	1957	746	82,295	82,295	10	3,964	63.9	307,008	142,825	18	..	..	..
		1956	746	102,524	102,524	465	4,555	63.9	358,359	169,803	16	..	..	..
	Mo.-Kans.-Texas Lines	1957	3,172	256,151	256,151	2,598	12,337	64.2	839,078	364,497	77	..	2	2.5
		1956	3,230	332,818	332,818	3,459	14,101	65.7	918,244	396,382	86	..	..	..
	Missouri Pacific	1957	9,660	1,155,776	1,155,776	9,202	54,846	68.8	3,887,802	1,766,932	364	..	25	6.4
		1956	9,701	1,178,593	1,178,593	10,535	53,844	65.1	3,722,193	1,674,948	347	..	44	11.3
	Texas & Pacific	1957	1,822	272,868	272,868	5,327	13,373	63.0	967,282	376,695	41	..	1	2.4
		1956	1,822	262,753	262,753	2,938	13,824	66.2	960,074	385,720	62	..	1	1.6
	St. Louis-San Francisco	1957	4,573	622,838	622,838	5,978	25,426	66.3	1,724,316	787,316	101	..	8	7.3
		1956	4,573	659,058	659,058	6,233	25,946	67.2	1,750,385	784,720	107	..	4	3.6
	St. Louis Southw. Lines	1957	1,554	316,248	316,282	1,516	14,649	72.7	908,829	406,259	57	..	2	3.4
		1956	1,554	322,351	322,381	1,503	14,641	73.1	907,569	405,696	52	..	1	1.9
	Texas & New Orleans	1957	4,272	652,884	652,884	918	27,777	64.2	1,962,871	872,936	141	..	2	1.4
		1956	4,287	680,409	680,409	299	28,641	64.4	1,997,388	875,158	142	..	4	2.7

For the Month of August 1957 Compared with August 1956

Region	Road	Year	Freight cars on line: Home	Foreign	Total	Per Cent B.O.	G.t.m.per train-hr. excl.locos. and tenders	G.t.m.per train-mi. excl.locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
New Eng.	Boston & Maine	1957	1,768	8,230	9,998	1.6	39,765	2,667	1,126	28.4	875	47.5	5,362	15.0	106.8
		1956	1,590	8,213	9,803	3.1	36,952	2,504	1,037	26.7	790	43.5	5,069	14.8	135.7
	N. Y., N. H. & Htfd	1957	2,663	13,008	15,671	3.1	42,442	2,724	1,147	27.5	640	35.3	5,760	15.6	118.1
		1956	2,190	14,340	16,530	3.1	39,241	2,744	1,126	25.5	568	32.4	5,301	14.3	126.9
Great Lakes	Delaware & Hudson	1957	2,071	6,071	8,142	4.9	65,652	3,934	2,102	37.5	1,383	52.7	14,803	16.8	161.1
		1956	1,802	6,868	8,670	7.1	60,769	3,799	2,025	36.7	1,304	49.7	15,233	16.1	157.9
	Del., Lack. & Western	1957	4,753	12,247	17,000	4.3	53,968	3,108	1,351	28.3	678	34.4	11,797	17.7	162.7
		1956	3,814	11,951	15,765	3.0	47,743	2,827	1,253	28.7	782	38.7	12,080	17.2	185.8
	Erie	1957	8,624	19,703	28,327	3.4	69,675	3,467	1,358	24.4	957	57.2	12,074	20.3	132.1
		1956	5,488	18,608	24,096	2.6	65,042	3,378	1,369	24.7	1,114	63.9	12,085	19.5	133.2
	Grand Trunk Western	1957	4,987	7,801	12,788	7.9	48,199	2,391	922	27.8	501	30.3	6,881	20.3	94.5
		1956	4,393	8,245	12,638	7.3	46,615	2,210	912	30.0	613	34.2	8,439	21.3	131.9
	Lehigh Valley	1957	4,108	9,764	13,872	5.0	65,947	3,207	1,520	32.7	804	36.5	9,730	20.9	246.2
		1956	5,162	8,824	13,986	4.1	67,272	3,429	1,622	33.4	861	39.3	10,429	19.9	240.2
	New York Central	1957	55,879	82,604	138,483	3.2	50,904	3,184	1,410	32.3	711	36.9	9,056	16.2	159.6
		1956	56,477	92,335	148,812	2.7	49,573	3,123	1,416	32.5	720	35.6	9,535	16.2	147.7
	New York, Chic. & St. L.	1957	9,072	17,215	26,287	8.2	54,888	3,156	1,422	31.3	1,193	57.4	14,618	17.6	131.2
		1956	7,193	19,670	26,863	5.7	51,266	3,118	1,407	31.9	1,315	62.6	14,925	16.9	131.5
	Pitts. & Lake Erie	1957	4,927	8,810	13,737	4.5	60,898	4,021	2,537	55.8	405	10.8	23,724	15.2	142.5
		1956	5,877	5,985	11,862	6.4	62,102	4,188	2,614	56.9	498	12.7	21,596	15.0	143.8
	Wabash	1957	9,581	9,983	19,564	4.5	65,911	3,009	1,162	25.9	1,022	61.8	8,413	22.0	165.7
		1956	8,809	10,452	19,261	5.1	64,194	2,971	1,209	27.2	994	55.1	8,134	21.7	154.9
Central Eastern	Baltimore & Ohio	1957	51,360	43,453	94,813	8.9	52,184	3,465	1,713	39.8	879	36.0	14,215	15.3	112.7
		1956	47,875	56,053	103,928	6.1	50,108	3,328	1,676	40.3	874	34.4	14,822	15.4	124.4
	Bessemer & Lake Erie	1957	4,294	839	5,133	9.8	116,639	6,467	4,247	80.1	1,536	31.8	42,114	18.4	160.1
		1956	4,515	1,079	5,594	6.1	71,008	4,526	3,016	73.3	536	10.6	16,453	16.4	90.1
	Central RR Co. of New Jersey	1957	2,364	9,483	11,847	10.0	41,504	3,069	1,601	39.2	528	20.6	10,129	14.0	91.6
		1956	2,625	10,414	13,039	8.0	40,046	2,992	1,589	40.8	517	19.3	11,061	14.0	99.0
	Chicago & Eastern Ill.	1957	2,918	3,322	6,240	13.6	56,417	3,302	1,701	36.0	1,040	44.5	7,565	17.2	133.2
		1956	2,492	3,056	5,548	8.3	53,276	3,252	1,635	36.5	1,048	42.6	7,159	16.5	143.8
	Elgin, Joliet & Eastern	1957	7,288	9,632	16,920	5.9	20,856	2,590	1,410	44.6	217	7.7	15,381	8.5	84.9
		1956	6,478	8,302	14,780	5.3	19,968	2,573	1,395	43.6	232	8.3	14,494	8.1	85.1
	Pennsylvania System	1957	97,673	97,142	194,815	9.5	53,931	3,330	1,641	36.5	814	33.5	15,917	16.6	112.3
		1956	96,123	97,838	193,961	7.1	54,327	3,289	1,643	36.3	806	32.6	15,724	17.0	102.7
	Reading	1957	12,589	20,873	33,462	4.2	48,915	3,050	1,637	44.3	563	20.2	14,502	16.0	74.6
		1956	10,217	22,172	32,389	3.7	48,319	3,049	1,674	44.2	605	20.8	14,814	15.8	77.4
	Western Maryland	1957	4,802	2,948	7,750	3.1	52,694	3,603	2,095	50.1	1,412	43.6	13,069	15.1	124.8
		1956	3,163	4,797	7,960	3.9	48,900	3,472	1,976	48.1	1,172	38.4	12,786	14.3	160.3
Pocahontas	Chesapeake & Ohio	1957	57,222	38,427	95,649	.5	81,192	4,361	2,480	51.5	1,334	45.3	25,254	17.7	82.0
		1956	48,998	33,638	82,636	.9	74,423	4,034	2,295	50.6	1,433	49.2	23,625	18.6	96.2
	Norfolk & Western	1957	34,779	10,363	45,142	1.1	92,506	5,495	3,087	53.9	1,570	50.4	34,717	17.4	119.7
		1956	33,024	10,543	43,567	0.7	81,191	4,928	2,763	53.4	1,505	47.6	32,540	17.0	132.0
Southern	Atlantic Coast Line	1957	19,764	18,000	37,764	2.9	46,991	2,558	1,183	34.5	693	32.9	4,935	18.4	178.9
		1956	17,413	17,552	34,965	4.6	43,664	2,250	1,032	34.3	780	37.7	5,137	19.5	155.6
	Central of Georgia	1957	2,078	6,780	8,858	3.6	52,787	3,114	1,538	35.7	1,092	45.8	5,398	17.0	194.5
		1956	2,403	6,992	9,395	2.8	47,930	2,828	1,376	34.3	959	41.4	5,079	17.0	203.1
	Gulf, Mobile & Ohio	1957	5,402	9,840	15,242	7.9	73,268	3,885	1,892	33.6	1,063	46.0	6,049	18.9	104.2
		1956	4,785	10,692	15,477	6.0	69,368	3,730	1,786	32.3	1,059	46.8	5,851	18.6	107.3
	Illinois Central	1957	25,241	25,142	50,383	2.1	56,147	3,277	1,539	34.4	1,077	49.9	8,566	17.3	109.3
		1956	22,774	25,778	48,552	2.1	52,785	3,150	1,490	34.8	1,172	53.5	8,856	17.0	99.4
	Louisville & Nashville	1957	25,661	15,235	40,896	4.4	52,153	2,917	1,517	40.1	1,064	42.9	9,400	17.9	227.5
		1956	24,966	14,735	39,701	3.6	49,642	2,863	1,495	39.4	1,087	43.5	9,205	17.4	156.4
	Nash., Chatt. & St. Louis	1957	2,501	4,236	6,737	8.1	41,333	2,159	1,041	31.6	790	34.9	5,092	19.2	128.1
		1956	3,235	4,197	7,432	4.6	41,489	2,188	1,063	32.0	803	35.0	5,556	19.0	119.2
	Seaboard Air Line	1957	12,772	14,125	26,897	2.8	52,897	2,918	1,332	33.5	930	45.5	6,036	18.4	144.0
		1956	11,432	15,591	27,023	2.3	49,329	2,814	1,314	33.6	939	44.4	6,134	17.8	156.2
	Southern	1957	17,252	24,071	41,323	5.2	52,472	3,178	1,502	31.3	1,010	47.3	6,681	16.6	159.6
		1956	15,917	24,356	40,273	3.9	52,620	3,147	1,479	30.8	1,089	51.5	6,901	16.8	156.5
Northwestern	Chicago & North Western (*)	1957	21,522	35,049	56,571	5.3	49,018	2,875	1,167	31.5	643	33.6	3,884	17.2	172.9
		1956	19,221	38,547	57,768	3.9	48,054	3,124	1,328	30.3	615	30.9	3,804	15.6	154.9
	Chicago Great Western	1957	1,970	4,705	6,675	3.1	73,288	4,041	1,874	32.7	1,230	57.1	5,754	18.2	144.6
		1956	1,537	4,419	5,956	2.9	73,647	3,919	1,901	32.4	1,450	62.2	5,982	18.8	148.3
	Chic., Milw., St. P. & Pac.	1957	31,393	33,879	65,272	5.9	60,217	3,259	1,407	31.6	742	39.4	4,609	18.5	129.7
		1956	30,006	38,002	68,008	6.9	57,240	3,085	1,349	30.3	739	38.7	4,493	18.6	132.8
	Duluth, Missabe & Iron Range	1957	13,465	1,085	14,550	4.0	93,490	5,481	3,366	65.8	1,187	35.2	30,497	18.0	79.1
		1956	12,901	1,022	13,923	2.8	67,707	4,503	2,793	61.0	539	16.3	13,629	16.4	44.4
	Great Northern	1957	23,053	27,630	50,683	2.6	58,819	3,316	1,643	39.1	1,325	54.6	7,669	18.1	134.9
		1956	24,662	26,229	50,891	2.6	55,300	3,146	1,596	38.8	1,327	52.3	7,869	17.9	137.9
	Minneap., St. P. & S. Ste. M.	1957	6,587	11,165	17,752	2.8	50,136	2,409	1,094	33.4	1,021	50.1	3,975	20.9	178.6
		1956	6,435	9,817	16,252	4.7	51,193	2,596	1,243	33.5	1,046	47.5	4,110	19.8	162.3
	Northern Pacific	1957	17,651	22,172	39,823	3.8	60,552	3,099	1,357	31.7	1,049	53.8	6,059	19.6	103.9
		1956	18,546	19,636	38,182	5.1	57,482	3,071	1,405	31.3	1,054	50.0	6,404	18.8	101.2
	Spokane, Portland & Seattle	1957	1,503	5,038	6,541	1.8	44,165	3,061	1,387	29.8	1,076	48.3	7,144	14.5	102.8
		1956	1,443	4,714	6,157	2.3	43,244	3,197	1,625	34.5	1,359	51.7	8,927	13.6	105.9
Central Western	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1957	55,508	32,689	88,197	6.1	73,173	3,178	1,206	26.1	1,051	62.6	7,102	23.1	133.3
		1956	55,322	32,756	88,078	3.9	70,805	3,117	1,215	26.5	1,033	59.8	7,128	22.8	132.3
	Chic., Burl. & Quincy	1957	20,271	23,527	43,798	3.6	62,744	3,076	1,327	29.7	1,093	57.6	5,689	20.5	184.5
		1956	20,567	25,146	45,713	3.5	61,032	3,000	1,301	28.4	1,087	56.5	5,601	20.4	146.8
	Chic., Rock I. & Pac.	1957	12,205	24,463	36,668	5.5	56,684	2,868	1,253	32.1	1,083	54.5	5,222	19.8	181.1
		1956	11,432	22,137	33,569	5.4	55,739	2,788	1,230	31.1	1,120	55.0	4,947	20.0	182.5
	Denver & R. G. Wn.	1957	6,798	9,582	16,380	2.5	62,756	3,460	1,627	32.8	1,162	51.5	8,331	18.2	143.7
		1956	6,701	9,207	15,908	3.5	65,971	3,439	1,609	30.9	1,131	50.1	8,036	19.2	134.6
	Southern Pacific	1957	29,702	43,771	73,473	1.9	65,154	3,273	1,296	27.5	1,263	72.8	11,798	20.2	108.6
		1956	28,345	48,896	77,241	1.8	60,372	3,250	1,288	27.4	1,205	69.4	11,842	18.8	110.0
	Union Pacific	1957	31,394	37,795	69,189	1.8	84,035	3,330	1,343	28.0	1,599	91.9	11,191	25.4	169.6
		1956	30,849	35,653	66,502	2.2	78,497	3,110	1,229	26.9	1,449	86.3	10,344	25.5	162.0
	Western Pacific	1957	2,378	4,376	6,754	2.4	76,872	3,142	1,364	29.1	1,844	94.9	9,779	24.6	218.7
		1956	2,132	4,736	6,868	1.8	72,436	2,934	1,285	27.6	1,627	82.8	8,922	24.8	197.4
Southwestern	Kansas City Southern	1957	2,057	5,385	7,442	3.5	81,013	4,241	1,923	32.5	1,150	52.7	9,858	19.2	194.2
		1956	1,555	6,491	8,046	3.2	85,610	4,330	2,008	32.6	1,181	51.9	10,415	19.8	209.5
	Louisiana & Arkansas	1957	1,921	3,597	5,518	4.5	71,614	3,741	1,740	36.0	853	37.0	6,176	19.2	181.8
		1956	1,645	3,416	5,061	6.5	68,415	3,499	1,658	37.3	1,085	45.6	7,343	19.6	253.8
	Mo.-Kans.-Texas Lines	1957	3,996	7,072	11,068	8.9	55,808	3,304	1,435	29.5	1,026	54.0	3,707	17.0	115.2
		1956	3,542	6,642	10,184	7.5	57,538	2,765	1,193	28.1	1,267	68.6	3,959	20.9	133.4
	Missouri Pacific	1957	19,711	26,632	46,343	5.1	68,298	3,375	1,534	32.2	1,208	57.9	5,900	20.3	102.1
		1956	19,600	31,418	51,018	4.5	62,081	3,171	1,427	31.1	1,033	51.0	5,570	19.7	106.0
	Texas & Pacific	1957	2,922	5,623	8,545	2.8	76,308	3,573	1,391	28.2	1,341	75.6	6,669	21.5	222.1
		1956	2,662	6,216	8,878	2.7	76,683	3,662	1,471	27.9	1,391	75.3	6,829	21.0	150.2
	St. Louis-San Francisco	1957	9,522	13,178	22,700	1.6	56,183	2,778	1,269	31.0	1,141	55.6	5,554	20.3	204.5
		1956	10,828	13,560	24,388	3.1	53,435	2,666	1,195	29.2	1,045	59.8	5,603	20.1	218.7
	St. Louis Southw. Lines	1957	1,751	4,044	5,795	2.1	62,557	2,878	1,287	27.7	2,180	108.1	8,433	21.8	188.6
		1956	1,815	5,185	7,000	1.3	55,465	2,819	1,260	27.7	2,001	98.8	8,421	19.7	208.0
	Texas & New Orleans	1957	5,911	16,258	22,169	1.7	63,300	3,024	1,345	31.4	1,276	63.2	6,592	21.8	162.1
		1956	5,163	16,376	21,539	1.6	59,372	2,953	1,294	30.6	1,262	64.1	6,585	20.2	164.3

*Includes operations of Chicago, St. Paul, Minneapolis & Omaha Ry. Co., under lease, effective January 1, 1957.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

'Beefed-up' Trailers for Piggyback?

When the general swing to piggyback got under way a few years back, the usual practice was to equip existing flat cars with tie down devices and use ordinary highway trailers to handle traffic.

Departures from this approach were not long coming—first, in special-design cars like the 79-ft center-sill "Clejan" unit and the 75-ft cars built for the Pennsylvania. Now there's a noticeable trend toward trailer units with heavier design features—stronger units to meet the needs arising from impact, end-lash and oscillation peculiar to train operation.

Latest entry in the race for a stronger "piggyback trailer" is the Baker Trailer & Body Co. of St. Louis. The firm, with units in service on two roads, is putting its emphasis on one-piece full length underframes, stronger doors, heavier gage steel for outside "skin," and extra bracing all around. Weight of the unit is around 12,000 lb, some 1,500-lb heavier than the average over-the-highway trailer.

Behind this increased attention to trailer design is the need to further improve the already-good damage record in piggyback operation. Apart from the lading problem, of course, is the matter of damage to equipment itself. A number of roads have run impact tests on TOFC loads to study lading shifts, strength of rear doors and kingpins and tie-down devices. These tests have resulted in new approaches to tying down trailers, wider interest in the shock-absorbing features of the "Clejan" car and, not to be overlooked, the construction details of the trailers.

The Baker Company, for example, has leaned on this test experience to develop its trailer specifications. Trailers built so far embrace features like these:

- Four-hinge doors framed in 12-gage metal (instead of 16-gage) and the use of heavier tubing for the lock bar across the doors.
- 18-gage steel for "skins" instead of 20 to 22-gage.
- Square ends to facilitate loading, increase capacity and provide added lading protection.
- Quarter-inch plywood lining over ceilings and doors to protect packaged commodities.
- Five 12-gage posts, horizontally braced, across the front.
- Tarpaulin across inside of rear doors.
- Heavy oak flooring, tightly matched.
- 7-gage cross sills on 12-in. centers.

The Baker firm is not alone in its approach. As TOFC operations grow, it appears likely that the use of "above average" trailers by various builders will come into wider use as insurance against lading and equipment damage. What can happen is illustrated by the way Baker sold trailers to the second railroad to use its units. Officers of the road saw one of the trailers during an interline movement. They were interested, made inquiries and, in time, placed an order for such equipment themselves.

Railroading After Hours with Jim Lyne

NAMED FOR A MAN—I don't believe there's a Class I railroad named for a person—except the Pere Marquette, now absorbed into the C&O. I had supposed this railway had been named for a geographical area, probably a county. But no—I am told that the name comes directly from that of the French missionary. If so, then I suspect it's unique among American railway names—no other of which, that I can recall, being that of a person.

As consolidation goes forward I hope the resulting names of the merged companies will be imaginative and historical. Railroads, as they are, have much more attractive names than most industrial and utility companies.

NAMED FOR GENERALS—In Argentina they renamed their railways after generals. I don't see any particular reason for this, unless the generals had something to do with these particular railways, which I doubt that they did. But what's wrong with naming railroads after people, instead of only after geography?

"PACIFICO" REHABILITATED—I note that President Adolfo Ruiz Cortines of Mexico made a special trip, by train, a couple of weeks ago up to Hermosillo, Sonora, to celebrate completion of the rehabilitation program of the "Pacifico" railroad.

This is the former Southern Pacific of Mexico, which was purchased by the government from the parent company. The road was turned over in a sad physical condition—because the government had not allowed the private owners to make any money.

Considerably more than $100 million has been spent to dieselize the railway, reballast it, put in new ties and rail, and provide new equipment and buildings. Traffic is now moving at greatly increased speed, and with much more safety and reliability.

The general manager of the "Pacifico" is Benjamin Mendez, an experienced railroader—and to him is given the major credit for the speedy completion of the rehabilitation program.

The editors of the U.S. railroad employee magazines have just returned from holding their annual convention in Mexico, and I'm told our Mexican friends really rolled out the red carpet. Which is what they always do for visitors. When it comes to hospitable neighbors, U.S. railroaders are fortunate—to the south as well as the north.

TRAINMASTERS OR CONSULTANTS?—I was talking to a general manager the other day. I asked him if he agreed with me that railroad service might be greatly improved if a larger number of competent trainmasters were on the job. He said:

"I will trade three consultants for one good trainmaster."

He went on to explain that he had nothing against consultants—some of whom are very helpful. His point was, instead, that budgets are frequently more liberal for taking on consultants than they are for adding to supervision.

The really valuable consultant, it developed in this discussion, is the one who knows by experience what the best possible performance is and how to attain it. Such a man can upgrade the performance of an entire railroad, in the area of his specialty. He improves supervision by giving supervisors new and higher standards to aim at, and showing how to attain them.

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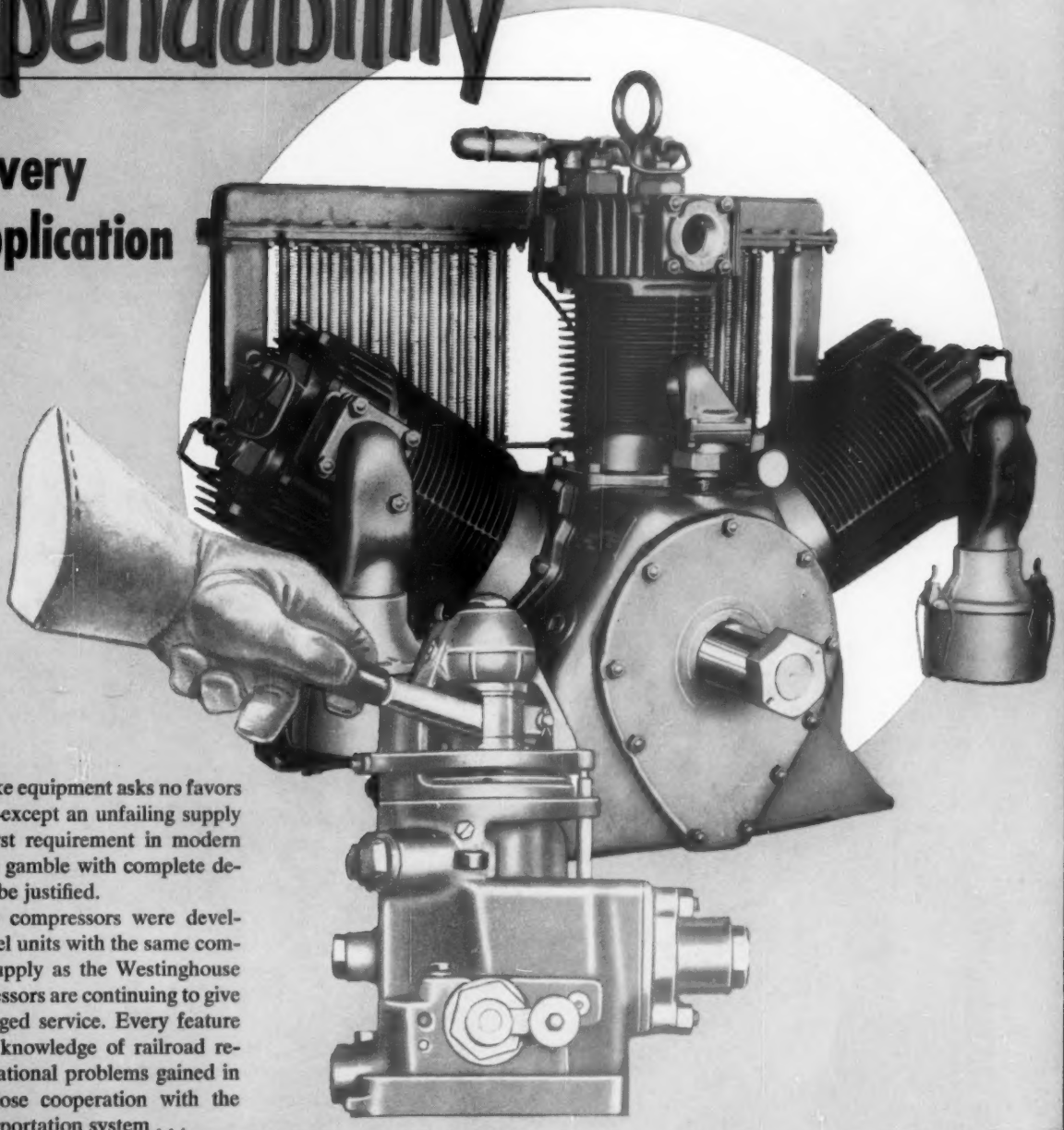

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MARKET OUTLOOK *at a glance*

Carloadings Slip 4.1% Under Preceding Week's

Loadings of revenue freight in the week ended November 16 totaled 647,298 cars, the Association of American Railroads announced on November 21. This was a decrease of 27,975 cars, or 4.1%, compared with the previous week; a decrease of 116,600 cars, or 15.3%, compared with the corresponding week last year; and a decrease of 118,918 cars, or 15.5%, compared with the equivalent 1955 week.

Loadings of revenue freight for the week ended November 9 totaled 675,273 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, November 9

District	1957	1956	1955
Eastern	102,850	125,933	126,804
Allegheny	127,781	150,612	149,534
Pocahontas	57,774	62,411	60,970
Southern	120,278	126,820	133,170
Northwestern	91,255	119,022	122,615
Central Western	125,127	132,477	138,143
Southwestern	50,208	55,575	60,806
Total Western Districts	266,590	307,074	321,564
Total All Roads	675,273	772,850	792,042
Commodities:			
Grain and grain products	50,152	52,463	56,098
Livestock	10,722	11,231	13,704
Coal	131,083	145,135	138,500
Coke	9,224	12,460	12,967
Forest Products	37,414	42,829	44,515
Ore	46,077	71,467	67,871
Merchandise l.c.l.	52,254	60,228	64,290
Miscellaneous	338,347	377,037	394,097
November 9	675,273	772,850	792,042
November 2	713,994	800,367	804,261
October 26	703,688	816,803	829,648
October 19	726,812	828,741	829,078
October 12	741,520	823,207	821,578
Cumulative total, 45 weeks	31,445,145	33,037,291	32,805,538

IN CANADA.—Carloadings for the seven-day period ended November 7 totaled 84,380 cars, compared with 128,757 cars for the previous ten-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
November 7, 1957	84,380	30,092
November 7, 1956	91,157	33,911
Cumulative Totals:		
November 7, 1957	3,511,220	1,408,218
November 7, 1956	3,815,188	1,489,174

New Equipment

FREIGHT-TRAIN CARS

► *Bessemer & Lake Erie.*—Ordered one 125-ton and one 135-ton flat cars, Thrall Car, at unit cost of $40,000; delivery expected next April.

► *Canadian Pacific.*—Ordered 475 triple hopper cars, National Steel Car, at cost exceeding $4,000,000.

► *Detroit & Mackinac.*—Ordered 25 70-ton hopper cars, General American, for delivery in second quarter of 1958.

Purchases & Inventories

► *Eight Months' Purchases Up 1.6%.*—Purchases by domestic railroads of all types of materials in this year's first eight months were $25,195,000, or 1.6%, higher than in comparable 1956 period; purchase and inventory estimates in following tables were prepared by Railway Age.

PURCHASES*	August 1957	Eight Months 1957	Eight Months 1956
	(000)	(000)	(000)
Equipment**	$ 28,830	$ 365,929	$ 318,049
Rail	5,741	78,048	60,304
Crossties	6,559	57,012	54,669
Other Material	95,608	833,027	850,822
Total from Manufacturers	$136,738	$1,334,016	$1,283,844
Fuel	32,519	291,314	316,291
Grand Total	$169,257	$1,625,330	$1,600,135

* Subject to revision
** Estimated value of all orders.

INVENTORIES*†	August 1, 1957	August 1, 1956
	(000)	(000)
Rail	$ 61,103	$ 49,683
Crossties	97,501	87,694
Other Material	542,593	560,284
Scrap	21,824	21,868
Fuel	31,380	30,751
Total	$754,401	$750,280

* Subject to revision
† All total inventory figures taken from ICC statement M-125 for month indicated.

New Facilities

► *Grand Trunk Western.*—Awarded contracts for work in connection with previously announced yard construction; contracts include construction of one-story building for car department office, shop, stores, wash- locker- and lunch-room, with storm water and sanitary drainage and heating, plus erection of pre-fab steel building for lumber shed and construction of 16,000 ft of 20-ft gravel roadway, all at Battle Creek, Mich.; and construction of 5,300 ft of 8-in. storm drainage system to serve car repair and engine terminal section at Flint, Mich. (Railway Age, May 14, 1956, p. 10).

► *Northern Pacific.*—Plans 1958 expenditure of $5,250,000 for rail and other track materials; road will relay 85 miles of main line track with 115- and 132-lb rail, including 50 miles of welded rail in North Dakota, Montana and Washington; also planned are additions and improvements to service and shop buildings, yard offices, stations and other structures ($630,000); and purchase of new roadway and shop machinery ($500,000).

(Continued from page 10)

. . . of benefits to employees who have no real attachment to railroading, who voluntarily quit the service, who are discharged or suspended for just cause, who are on strike against the industry, who are guilty of making or participating in fraudulent claims, who are entitled to immediate annuities under the Railroad Retirement or Social Security Acts, and, if you please, who are unable to perform their regular duties because of pregnancy."

"Over $30 million was paid out in such benefits during the last fiscal year from a fund financed by management and to which employees did not contribute anything. I am sure that all of you will agree that there is nothing unfair or unjust in the recommendations now before the Congress . . . to correct these inequities in the present retirement system law."

The security of the rail social insurance systems, he concluded, "is entirely dependent upon the welfare of the railroad industry, and increases in retirement and survivor benefits are possible only through additional revenues and this means, simply, higher taxes upon the present and future generations of railroad employers and their employees."

Santa Fe 'Non-Op' Strike Is Averted

Carrier and unions reach agreement in union shop dispute; use of dues for political purposes left for courts to settle.

Santa Fe and 15 non-operating unions reached agreement on a "modified form" of union shop contract last week, heading off a strike that had been called for 7 a.m., CST, November 22.

Agreement came 77 hours in advance of the strike deadline after prolonged conferences held under auspices of National Mediation Board Chairman Francis A. O'Neill, Jr., and Member Robert O. Boyd.

The issue of union use of members' dues for political purposes did not enter directly into the final agreement, according to a union spokesman. Any dispute arising over the issue, it was indicated by the railroad, would be open for judgment by the courts.

Fred G. Gurley, Santa Fe chairman and chief executive officer, said the railroad and union representatives "have found a common meeting ground and reached an agreement acceptable to both sides."

George E. Leighty, president of the Order of Railroad Telegraphers and chairman of the joint union negotiating committee, called the agreement "a definite victory for the unions," and added that it is "slightly better" than the eastern lines union shop pact as far as the unions are concerned.

Mr. Gurley said the agreement provides that all present non-union employees and new employees, who otherwise would be required to become members of the non-operating unions, will not be required to become full members, but must pay dues, fees and assessments.

Under the agreement, according to the carrier, the decision of a neutral arbitrator as to facts shall be final and binding, but under a new clause the neutral arbitrator will not pass on questions in connection with legally permissible limits of the agreement under applicable law. This stipulation, it was indicated, "is directed to the question of possible use of dues for political purposes, and in case of a dispute that question would be open for determination by the courts under applicable law, including pertinent court decisions."

Mr. Leighty told Railway Age that the final agreement "is in accord with agreements previously signed on other railroads" and that it is "strictly along the lines of the contentions the unions have been making." Nothing in the pact, he added, "in any way limits the funds of the unions. . . nor restricts the unions in any way in any political activity they may want to engage in." The agreement, he said, does not mention such use of funds.

It was this issue on which Santa Fe had based a major part of its argument in fighting the case. The carrier opposed the principle of "any form of compulsory membership or compulsory payment of any sums of money as a condition of employment"; but, Santa Fe said it would go along with the union demands provided that no employee be discharged for failing to pay for contributions or expenditures by the unions for political or ideological purposes or other purposes not connected with collective bargaining.

The road sought incorporation of a paragraph into the agreement stating that "The company will not be required to discharge an employee for failure to pay dues, initiation fees or assessments which are to be used for the support of a political candidate, party or committee or for the advancement of political ideologies nor to pay a part of dues, initiation fees or assessments which part is to be used for such purposes."

The new agreement, it was reported, does not spell out a definite restriction limiting use of dues, fees and assessments to collective bargaining purposes. Santa Fe's contention has been, however, that no employee could be forced to pay any more than such funds as were to be used for bargaining. One section of the agreement, the carrier noted, leaves the entire question open for judicial decision.

AAR Research Is Honored

The George R. Henderson Medal of the Franklin Institute has been awarded to the Association of American Railroads for the latter's many accomplishments in research. William T. Faricy (right), AAR chairman, is shown accepting the medal from Dr. S. Wyman Rolph, president of the institute, at the annual medal day ceremonies in Philadelphia.

B&O Moves to Cut Its Passenger Service

The Baltimore & Ohio has requested authority to discontinue all passenger service between Baltimore, Md., Wilmington, Del., Philadelphia and New York City.

A petition asking for permission to discontinue the service has been filed with the Public Service Commission of Maryland and similar authorities in Delaware and Pennsylvania. Through passenger-train service between Baltimore, Washington, D. C., and the west will be continued, as will Baltimore-Washington commuter train service. No change is contemplated in freight service.

In its petition to discontinue passenger trains north and east of Baltimore, the B&O said that "the general public has substantially abandoned its use of the trains for other modes of travel." Major reason for this loss of patronage, it added, is "the large expenditures made in recent years by state and federal bodies for the improvement of highway and air travel paralleling the line of railroad involved."

Patronage of trains on the route covered by the petition has fallen about 46% since 1946, the road said, and simultaneously the expenses of operating the trains have risen sharply.

If the petition is granted, the B&O said, the public will not be adversely affected. "Other public transportation facilities . . .

amply sufficient to meet the public convenience and necessity are in operation for handling passenger traffic. As compared to the six roundtrips per day between Baltimore and New York via the B&O, the Pennsylvania operates some 20 trains per day in each direction between these points. Bus lines operate some 50 roundtrips per day, and the air lines some 13 roundtrips per day. The air lines also operate some 81 roundtrips per day between Washington and New York."

Public Relations Called Key to RR Future

Chairman Clarke of ICC put it that way in address at annual convention of National Defense Transportation Association.

The chairman of the Interstate Commerce Commission, Owen Clarke, said last week that railroad managements "hold the key to their future in the manner in which they handle their public relations."

He also expressed his view that solution to the car-supply problem should and will come from within the railroad industry rather than through a government-assistance plan like that sponsored by eastern roads under the leadership of J. M. Symes, president of the Pennsylvania. And he suggested coordination as an alternative to competitive struggles, coordination meaning "integration of service, not common ownership."

Mr. Clarke spoke November 19 at the Railroad Industry Forum which was part of the National Defense Transportation Association's annual convention, held in Washington November 17-21. Other participants in the forum discusssion were F. B. Whitman, president of the Western Pacific; A. L. Hammell, president of the Railway Express Agency; James G. Lyne, editor of Railway Age; Giles Morrow, president of the Freight Forwarders Institute; and General Charles L. Bolte, USA (ret.), special assistant to the chairman of the board, ACF Industries, Inc.

Moderator of the panel was Dr. George P. Baker, James J. Hill professor of transportation, Harvard Business School, and president, Transportation Association of America. Assistant moderators and questioning panel were Ralph J. Alexander, acting executive director, Bureau of Transportation, Post Office Department; and Frank L. Murphy, assistant vice-president, Pullman-Standard Car Manufacturing Company.

The railroad public relations which ICC Chairman Clarke had in mind are those concerned with freight traffic as well as passenger business. He said:

"The time for negative public relations, of the cry against unfair treatment and unfair advantages accorded other modes, is passing; and I believe that railroad management is awakening to this fact. The economic status of our railroads, which rightly or wrongly is so often attributed to unfair regulatory practices and government incentives to other modes, has, I believe, reached the point where the pendulum is beginning to swing in the other direction.

"There is a trend toward greater freedom in rate making, particularly as between modes providing continuous service, and other transport fields are already beginning to feel the firm hand of regulation where government regulation is needed. The day of standardized regulatory measures, applied equally to various media of transportation is not too far in the future. Cooperation with regulatory bodies on the part of railway management, and constructive suggestions for improving their efforts, as opposed to denunciation and criticism, will help hasten this day."

The car-supply problem, as Mr. Clarke sees it, stems from "intra-industry rivalry and practices." From his prediction that the solution will come from the industry, he followed through to this comment: "Proposals such as the Symes plan emphasize the problem, but in injecting the likelihood of further extension of government into private enterprise they go against the current of our nation's progress, and therefore do not in my opinion provide the appropriate solution."

In addition to the economic status of the railroads, the freight-car-supply situation and the "competitive separation of the modes of transport," Mr. Clarke listed a fourth "chief" transportation problem: "The overcrowding and hazardous condition of our streets and highways and the attendant effect this has had on public transit and mass passenger transportation."

That situation "suggests the coming revival of growth in rapid public transit and fast passenger commuter service," the ICC chairman added. And this is a "revolution" which appears to him to be "all too slow in coming about." At the same time he recognizes that economic questions must be answered first.

President Whitman of the WP emphasized the ability of the railroads to meet defense needs, referring to "push-button freight yards, centralized traffic control, piggyback service and special purpose freight equipment." With such "tremendous technological improvements" already made, he still saw the industry "on the threshold of many more developments which will improve railroad service and the basic productivity of this form of transportation."

Along the same line, Mr. Hammell reported that the Express Agency has been acquiring a new and modern vehicle fleet at a cost of $45 million, and spent $21½ million during the past two years for 1,000 high-speed railroad refrigerator cars. "Additional millions have gone into the construction of new terminals and the modernization of existing facilities," Mr. Hammell added.

Mr. Lyne discussed the question of how future freight traffic is to be divided between railroads and other forms of transportation. The answer, he said, depended on whether the division is to be on political or economic grounds. He noted that the "political division of traffic has, so far, worked greatly to the disadvantage of the railroads," but he assumed that political intervention in the next 10 years will either recede or, at least, get no worse than it now is.

On that basis, he predicted that railroads would follow a course of making their rates reflect the comparative economy of rail service. And he suggested that there would then be no reason why the railroads' share of total freight traffic should decline any further than it has;

New Development Area Set Up

The largest area immediately available for new industrial development in northern New England was established recently when the Maine Central bought some 50 acres from local industrialists and announced it is joining them in active search for new enterprises to be located on a 260-acre plot alongside MC main line tracks at the Bangor, Me.-Hermon boundary. John P. Scully (center), manager industrial, real estate and tax department of the MC, is handing checks marking purchase of the land to Kenneth Kurson (left), of the Bangor Drive-In Theaters chain, and James F. White, treasurer of the Bangor Real Estate Development Company.

"on the other hand, I'd expect the railroad ratio to increase," Mr. Lyne added.

If political factors "continue to grow in influence," he warned, the likely outcome will be "socialization of the railroads." He also said that such a "tragedy from the standpoint of free enterprise" would "certainly not spell the doom of the railroads as a competitor for traffic." Government ownership, he added, "would probably bring about the sudden termination of the contra-economic handicaps under which railroads now labor."

"The possibility of railroad socialization," Mr. Lyne said, "carries with it a much greater threat to the traffic-winning advantages of the railroads' rivals than it does to the railroads' competitive strength . . . Comparative costs are in the railroads' favor for the bulk of the nation's freight traffic—and it is to the advantage of everyone opposed to the further spread of socialization to give the railroads the opportunity to price themselves into the freight market to the full extent of their ability to do so."

Other proceedings of the convention included presentation of the association's National Defense Transportation Award (made annually) to Donald J. Russell, president of the Southern Pacific. The presentation was made by Secretary of the Army Brucker, at the annual-banquet session presided over by the association's president, Clark Hungerford, president of the Frisco.

ODM Plans New Transport Control

Federal government planners for defense against nuclear attack have now concluded that the emergency transportation set-up should be a "much more effective and tightly knit organization" than was previously contemplated. Present plans call for coverage of all intercity transportation by the emergency organization.

This was revealed last week by the director of the Office of Defense Mobilization, Gordon Gray, when he spoke at the annual convention of the National Defense Transportation Association in Washington. The prospective contingencies, he said, "compel organizational developments of a sort not hitherto contemplated." He mentioned how a nuclear attack might segmentize transportation systems or leave much transport personnel immobilized. The ODM director added:

"Obviously, one of the first responsibilities of the federal government would be that of the restoration of a national transportation system. Our present planning contemplates the creation of an emergency transport organization covering all intercity transportation. With adequate warning, this organization would come into being before an attack.

"If an attack occurs without warning, this organization as soon as it could be put together, would have to appraise the situation to determine what transportation services would be required under the greatly altered conditions that would exist. It would have to decide what means were appropriate for the provision of those services in the light of available resources. It would provide for guidance in the clearance and decontamination of routes and the reconstruction of facilities. It would also provide a priority guidance in the light of the national situation and of the objectives which the government had determined upon in its efforts to shape a post-attack policy. Transportation would become an instrument of national policy to an unusual degree in this period and would have to be dealt with accordingly.

"It is quite likely that in the immediate post-attack period, national direction would not be possible. Until it could be asserted, the emergency transport organization would require strong regional and local complements established in such a way as to enable them to operate, and cooperate with other federal leadership.

"Thus, the dual purpose of providing effective regional elements of the national organization for operating purposes and making these regional elements capable of operating on their own within predetermined general policy will have to be considered in developing this organization. It is our intent to create this organization on a standby basis and to do this, we must look, in large part, to the transportation industries to supply the personnel required. These personnel will become members of the National Defense Executive Reserve. Those peacetime government agencies having administrative and operating responsibilities will, of course, be incorporated in or related to the emergency organization.

"All of the operating tasks which will be required must, in the final analysis, be performed by the carriers. We have the highest regard for their competence and for their ability to meet and to cope with emergencies. We recognize, and we believe they will also recognize, that the wholly extraordinary conditions for which we must prepare will require a kind and degree of organization hitherto unnecessary and unknown in this country. Only by such an organization can we attain effective leadership and promote the fullest cooperation in the pursuit of common ends that make sense in terms of national survival. In developing and perfecting the organization and policies through which we hope such leadership can be provided, we shall, of course, solicit the advice and aid of the transportation industry in cooperation with our delegate agencies."

Correction—Microwave

In the article on p. 24 of the Nov. 11 Railway Age, the statement that "western roads are the largest users of microwave—the Santa Fe, Rock Island and Union Pacific," should have named the Southern Pacific instead of the Union Pacific.

People in the News

R. R. Manion
NYC

Eugene R. Bernardi
NYC

John L. Beckel
NYC

George E. Robinson
NYC

NEW YORK CENTRAL.—R. R. Manion, assistant vice-president—engineering, New York, appointed to the new position of assistant vice-president—operation. **Beverly S. Converse,** director of engineering, succeeds Mr. Manion. **Eugene R. Bernardi,** assistant chief engineer, replaces Mr. Converse. **John L. Beckel,** bridge engineer, named engineer of structures, succeeding **George E. Robinson,** who assumes Mr. Bernardi's former duties as assistant chief engineer. A picture of Mr. Converse was published in Railway Age, Jan. 14, p. 148.

H. Liebert appointed senior industrial engineer, New York, succeeding **Charles A. Pease,** who retired October 31.

E. C. Jackson appointed general signal inspector, Western district, Cleveland, succeeding the late **I. D. Hesler. P. R. Whited** succeeds Mr. Jackson as assistant general signal inspector, Western district, Cleveland.

W. E. Tanner appointed trainmaster, St. Lawrence division, Massena, N.Y., succeeding **F. T. Putney,** transferred to the Adirondack division, Malone, N.Y.

ONTARIO NORTHLAND.—A. Jardine, superintendent, Englehart, Ont., appointed assistant general manager, North Bay, Ont. **H. R. McCleary,** assistant superintendent, Englehart, named acting superintendent there.

PULLMAN COMPANY.—George W. Bohannon, vice-president, operating, Chicago, elected executive vice-president.

TEXAS & NEW ORLEANS.—Frank V. Schaub, assistant passenger traffic and public relations manager, New Orleans, appointed acting passenger traffic and public relations manager, with headquarters at Houston and New Orleans.

J. C. Carter, executive assistant in charge of public relations, Houston, retired November 15.

OBITUARY

James C. DeJarnette, Jr., 60, chief engineer, **Richmond, Fredericksburg & Potomac,** Richmond, Va., died November 10.

Sidney L. Miller, 67, professor and head of the department of transportation and public utilities, University of Pittsburgh, died November 9.

Current OPERATING DEPARTMENT Questions

What savings from modern braking?

There has been a lot of talk lately of the savings which the flat maintaining valve for the 24-RL brake equipment makes possible. It occurred to me that dynamic braking, too, is making a contribution to expense reduction. Specifically, I thought that these two features should save on brake shoes; save time in setting up retainers; and reduce damage to equipment. Therefore, I wrote officers of a number of roads, asking that they be as specific as possible in their answers. One road had made no study of the subject, because it would be "costly," and the accuracy of the results would be "questionable." Below are three other replies.—*G.C.R.*

"We feel that there are definite savings in the three categories which you mentioned. However, we do not have any specific figures to support this theory and our conclusions are based upon the observance of day to day train operation on our railroad.

"Consequently, I am not in position to furnish any specific or conclusive data which could be used to evaluate such economies."—*D. R. Collins, superintendent of air brakes, Denver & Rio Grande Western.*

Do modern brakes save train time?

Dynamic brakes and pressure maintaining save shoes and crew time.

"Our figures indicate 12,578 miles per brake shoe on locomotives not equipped with the dynamic brake. Locomotives in similar service equipped with the dynamic brake average 18,162 miles per brake shoe.

"On one branch where retainers are normally used, 1,344 freight trains were operated during the past year. Of these trains 1,050 saved an average of 20 minutes per train due to pressure maintaining eliminating the need for retainers. This represents a saving of 350 crew-hours, or 1,750 man-hours. The monetary saving is not computed as this would vary depending on whether crews were on pro rata or punitive time.

"There are no figures available as to brake shoe saving or lesser damage to equipment and lading through use of pressure maintaining."—*A. N. Jewell, general manager, Reading.*

Does dynamic brake decrease shoe wear?

"The severity of grades on the railroad determines the economies incident to the use of dynamic brakes. These savings include a reduction in brake shoe replacements and wheel wear, as well as the expense resulting from delays due to stops for wheel cooling and inspection. Our experience reflects that the greatest savings are realized on long descending grades where tonnage and speed are such that the maximum retarding force of dynamic brakes is equal to or greater than the accelerating force of the train on the grade.

"It is interesting to note that as early as 1953, when our road operations were approximately 80% dieselized, a comparison was made with the time we were entirely steam-powered, which reflected a 30.56% reduction in brake shoe replacements and a 45.26% reduction in the number of wheels changed. We have no economy figures readily available indicating the time saved in setting up retaining valves, nor for stops made to cool wheels and for inspection; however, we feel that our operations are vastly improved, particularly in heavy grade territories.

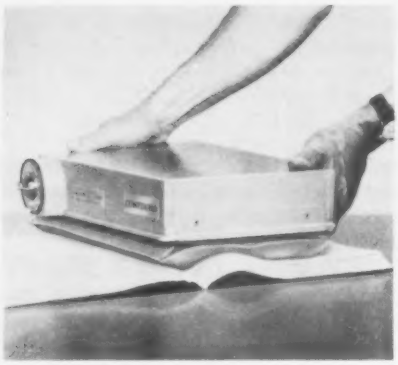
"Our experience in pressure maintaining braking is somewhat limited, but we do know that this type of braking reduces slack action on descending grades, and in rolling territory it reduces the need for compressed air. Our dynamic brake grid failures also have been curtailed.

"With pressure maintaining braking, the number of retaining valves required should be less than that needed for recharging during cycle braking. Furthermore, wheel heat temperatures should be lower with pressure maintaining braking because of the evenly distributed brake application throughout the train."—*J. W. Corbett, vice-president, Southern Pacific.*

It's obvious that these two features of modern braking have proved valuable to the railroads. Mr. Corbett, by the way, brings out a point which I hadn't heard mentioned before, viz., pressure maintaining reduces failures of the dynamic brake grids. Flat maintaining also permits running release, I'm told—another important feature.—*G.C.R.*

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

New Products Report



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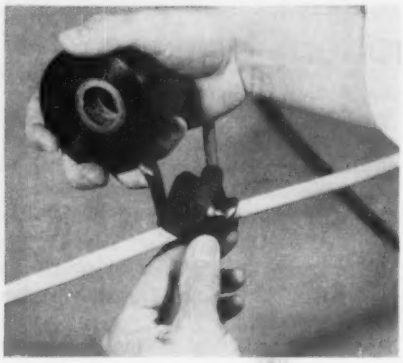
Also useful in offices, the Contoura copies correspondence or blue prints. *F. G. Ludwig, Inc., Dept. RA, 105 Coulter st., Old Saybrook, Conn.* •



Joint Pad Protects Insulation

A method of padding the sharp corners on electrical connectors, particularly suited to locomotive wiring, is illustrated. It saves both time and tape for making a splice or cushioning critical spots. By forming a cross with two pieces of Scotchfil brand insulating putty, the connector is enclosed in a padding of the putty and ready for wrapping. About 15% of the average time required for insulating splices is saved, as well as about 50% of the tape. *Minnesota Mining & Manufacturing Co., Dept. RA, 900 Bush ave., St. Paul 6, Minn.* •

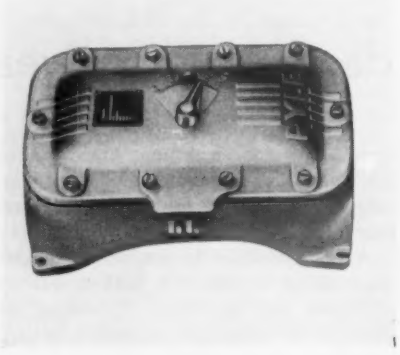
Power Space Boosted

New-design 4,000- and 6,000-lb low lift pallet industrial trucks—Transporter Models WPY-4 and WPY-6—provide space for approximately 50% more power. An increase in power was achieved by enlarging the battery compartment to 15½ in. providing space to accommodate up to 6-cell, 23-plate lead acid batteries, or equivalent. Even with its larger battery compartment, the low lift Transporter measures only 29 in. plus length of load. *Automatic Transportation Company, Dept. RA, 149 West 87th st., Chicago 20* •

Non-Live Extension Cord Reels

Two portable cable reels featuring wide adaptability have no current collector, sliding brushes or spring contacts, and will handle any size wire or cable.

Adjustable steel pins can be inserted to fit the desired coil diameter, with the lock-bearing adjustable to any coil-width. Loading requires only pulling one end of the cord through an opening in the removable side plate and coiling the cord on inside and outside of the reel, ready for instant use. *Hykon Manufacturing Company, Dept. RA, P.O. Box 923, Alliance, Ohio* •



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Unions Could Turn the Tide

The critical situation that confronts the railroads should be of just as much concern to the leaders of railway labor, as to railroad management and investors. Railway unions certainly cannot thrive if the railroad industry does not.

The essence of the railroad crisis is the continuing diversion of traffic to rival methods of transportation—and meager railroad earnings.

No other one thing—not even the easing of regulatory restraints—would so strengthen the railroads in competition as would a modernization of restrictive union rules.

The leaders of the railway labor organizations are an able body of men, on the average. Moreover, they are professional railroaders—not at all the kind of nondescript people who have come into leadership of unions in some other industries.

Most of the railway union leaders are also men of unquestionable loyalty to the railroad industry. Some of the most penetrating analyses yet made of the inequitable treatment of the railroad industry by government have been those by leaders of railway unions.

But with all the integrity, loyalty and understanding of railroad problems shown by these union people—union policy continues to be one of the major handicaps to the railroads in meeting the competition of other forms of transportation. And the recent big increase in railway wages was just about as inopportune as anything that ever happened to the railroads.

No one would expect the unions to surrender voluntarily any of the concessions they have won over the years—except where it can be shown that such concessions are plainly necessary to meet the competition of other forms of transportation. But working rules which provide a day's pay for 100 miles run—the same basis that prevailed 60 or 70 years ago—are obviously a grievous industry burden. Bus and truck operators, and airlines, do not suffer this restriction; and they are using their advantage competitively.

There are other union rules that demonstrably do unionists much more harm than good. Take so-called "full" crew rules and laws, for instance —requiring the employment of people who perform no useful duties. Such rules do not "make work." What they do is force the railroads to lay off or refrain from hiring a man who would do some valuable work for his wages, in order to pay the money to one who does nothing toward giving customers more economical service.

The railroads are, by nature, the most economical form of land transportation. Except for the artifical handicaps laid upon them, they would have no serious trouble in meeting their competition. Some of their handicaps come from government, but some of them also come from obsolete working rules.

It is harmful to the railroads in meeting competition that they have to pay taxes on their roadway while their competitors do not. But it is equally harmful to the railroads competitively that a run of 100 miles calls for a day's pay on the railroads, while truck and bus employees do upwards of 200 miles for a day's pay.

WHOSE MOVE IS IT?: Nobody could expect union leaders to be receptive to modifying restrictive rules—unless management were going to use such relief to improve the industry's competitive strength. Management has not usually shown much enthusiasm for consulting unions on questions of competitive service and rates. With the industry's competitive situation as serious as it is, though, a new look may be needed at the kinds of questions unions and managements customarily discuss with each other.

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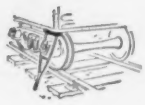
WHY LIMP ALONG WITH A "CRUTCH"  *WHEN A CURE IS AVAILABLE?*

Timken® bearings don't just relieve the Hot Box Problem— they Cure it!

... and they pay for themselves over and over in operating and maintenance savings

TO really *cure* the hot box problem you must eliminate its cause, the friction bearing itself. Unlike costly "crutch" devices that merely attempt to improve friction bearing performance, Timken® tapered roller bearings do away with friction bearings.

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The addition of "crutch" devices to friction bearings in an attempt to improve their performance narrows the price gap between friction bearings and Timken roller bearings. And a practice recently adopted by one major railroad can shrink it even more.

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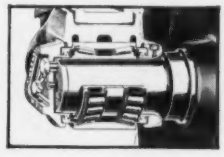
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